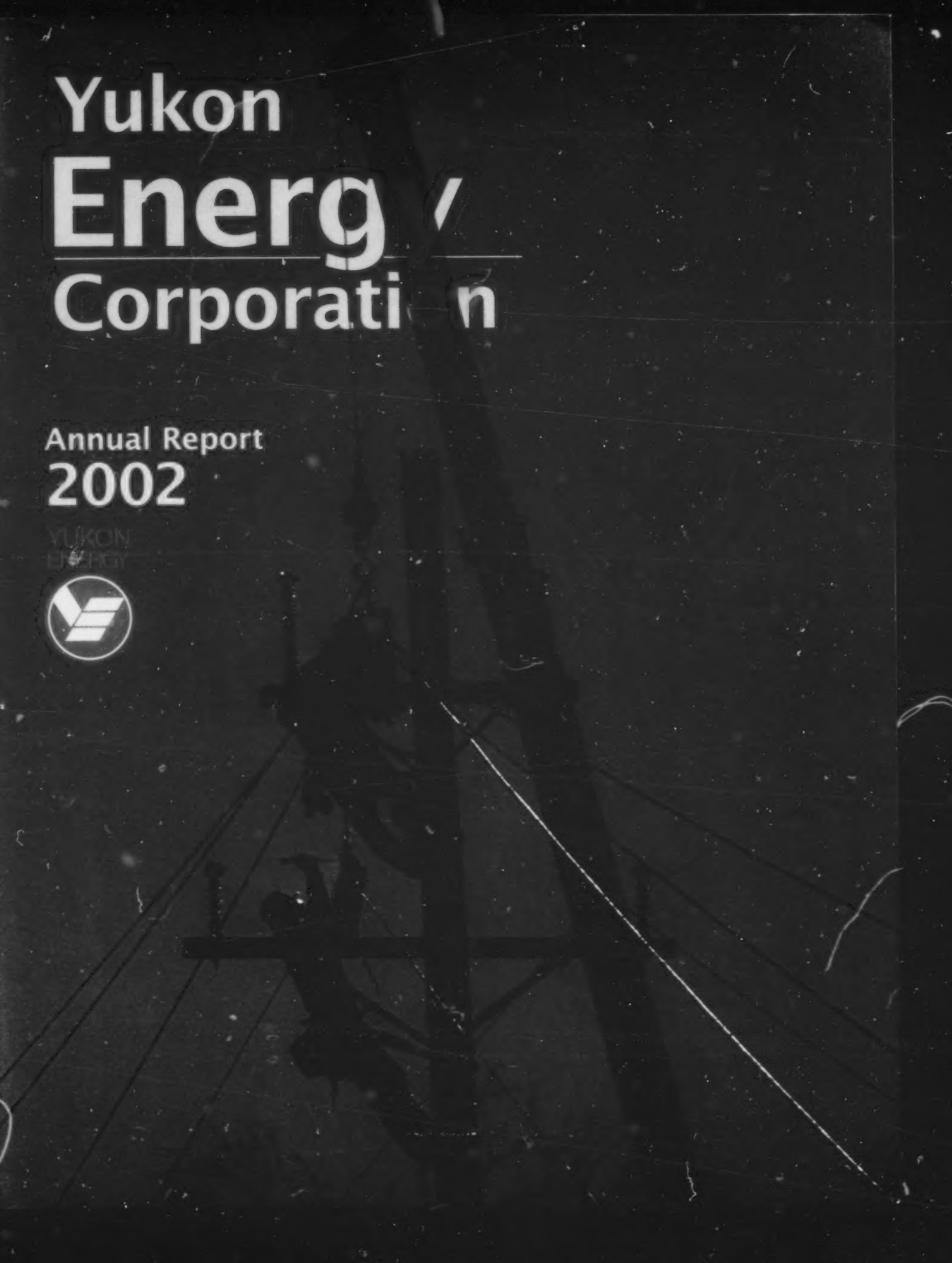
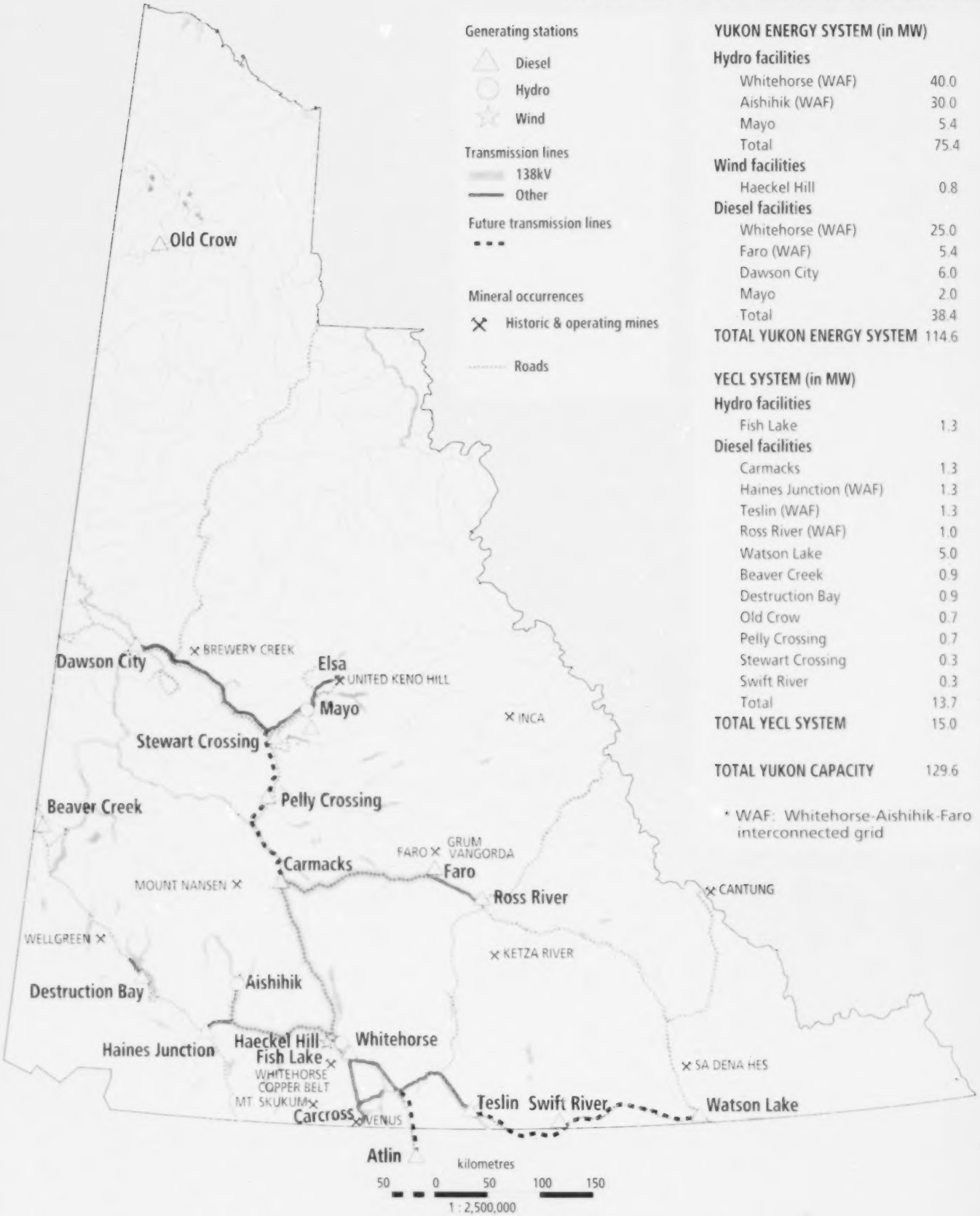
# Yukon Energy Corporation

## Annual Report 2002

YUKON ENERGY



# YUKON TERRITORY POWER INFRASTRUCTURE



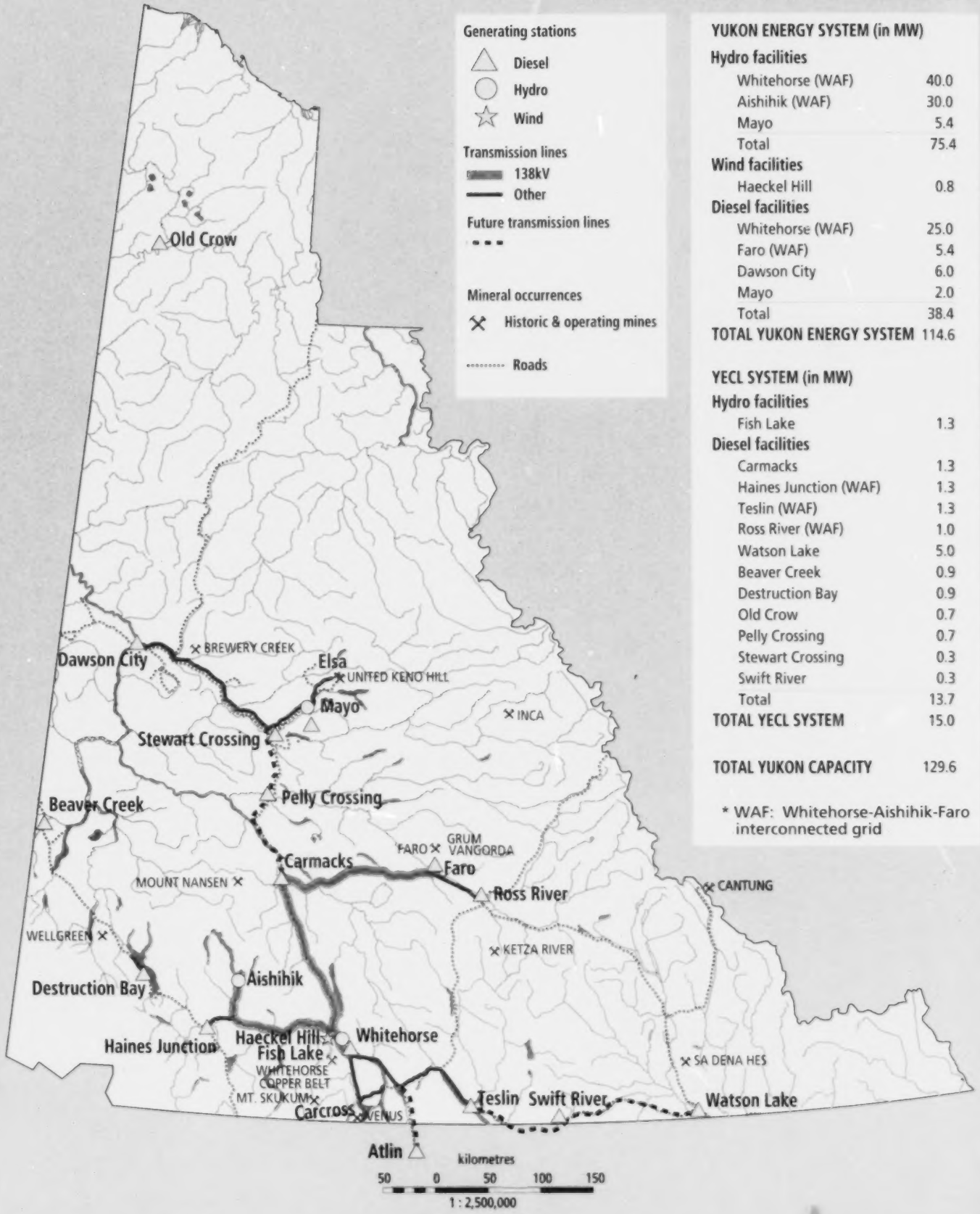

| YUKON ENERGY SYSTEM (in MW) | |
|---|---|
| **Hydro facilities** | |
| Whitehorse (WAF) | 40.0 |
| Aishihik (WAF) | 30.0 |
| Mayo | 5.4 |
| Total | 75.4 |
| **Wind facilities** | |
| Haeckel Hill | 0.8 |
| **Diesel facilities** | |
| Whitehorse (WAF) | 25.0 |
| Faro (WAF) | 5.4 |
| Dawson City | 6.0 |
| Mayo | 2.0 |
| Total | 38.4 |
| **TOTAL YUKON ENERGY SYSTEM** | 114.6 |

| YECL SYSTEM (in MW) | |
|---|---|
| **Hydro facilities** | |
| Fish Lake | 1.3 |
| **Diesel facilities** | |
| Carmacks | 1.3 |
| Haines Junction (WAF) | 1.3 |
| Teslin (WAF) | 1.3 |
| Ross River (WAF) | 1.0 |
| Watson Lake | 5.0 |
| Beaver Creek | 0.9 |
| Destruction Bay | 0.9 |
| Old Crow | 0.7 |
| Pelly Crossing | 0.7 |
| Stewart Crossing | 0.3 |
| Swift River | 0.3 |
| Total | 13.7 |
| **TOTAL YECL SYSTEM** | 15.0 |

| | |
|---|---|
| **TOTAL YUKON CAPACITY** | 129.6 |

* WAF: Whitehorse-Aishihik-Faro interconnected grid

# YUKON TERRITORY POWER INFRASTRUCTURE




| YUKON ENERGY SYSTEM (in MW) | |
|---|---|
| **Hydro facilities** | |
| Whitehorse (WAF) | 40.0 |
| Aishihik (WAF) | 30.0 |
| Mayo | 5.4 |
| Total | 75.4 |
| **Wind facilities** | |
| Haeckel Hill | 0.8 |
| **Diesel facilities** | |
| Whitehorse (WAF) | 25.0 |
| Faro (WAF) | 5.4 |
| Dawson City | 6.0 |
| Mayo | 2.0 |
| Total | 38.4 |
| **TOTAL YUKON ENERGY SYSTEM** | 114.6 |

| YECL SYSTEM (in MW) | |
|---|---|
| **Hydro facilities** | |
| Fish Lake | 1.3 |
| **Diesel facilities** | |
| Carmacks | 1.3 |
| Haines Junction (WAF) | 1.3 |
| Teslin (WAF) | 1.3 |
| Ross River (WAF) | 1.0 |
| Watson Lake | 5.0 |
| Beaver Creek | 0.9 |
| Destruction Bay | 0.9 |
| Old Crow | 0.7 |
| Pelly Crossing | 0.7 |
| Stewart Crossing | 0.3 |
| Swift River | 0.3 |
| Total | 13.7 |
| **TOTAL YECL SYSTEM** | 15.0 |
| **TOTAL YUKON CAPACITY** | 129.6 |

* WAF: Whitehorse-Aishihik-Faro interconnected grid

June 30, 2003

David Morrison
Chair, Yukon Development Corporation
Box 2703
Whitehorse, Yukon Y1A 2C6

Mr. Morrison:

I am pleased to submit the 2002 annual report for Yukon Energy Corporation outlining significant activities and accomplishments of the corporation over the past year.

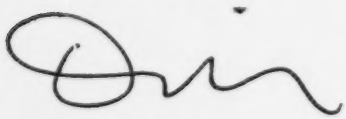
During the course of 2002 we tackled a demanding agenda. A highlight included securing a new, long-term water license from the Yukon Territory Water Board for the Aishihik Lake generating station after almost a decade of work with stakeholders, regulatory bodies and the Champagne & Aishihik First Nations. Construction of the Mayo-Dawson City transmission line continued, and while challenging, this new infrastructure will provide long-term cost-savings for consumers, renewable power options for customers along the corridor, and environmental benefits. We promoted sales of renewable hydro power and expanded cold climate wind research and development for future energy supply. We also took steps to strengthen our commitment to occupational health and safety. And the corporation lent its support in many ways to community and environmental activities throughout the territory.

Although our working relationship with our customers and many agencies, organizations and sister companies is integral to corporate effectiveness, the individual and collective efforts of Yukon Energy's employees are at the heart of our success. In 2002, our employees and operations attracted a considerable amount of national recognition. The corporation received the "Best Developed Outdoor Site" and the "Best Attraction of National or International Interest" awards for the Whitehorse Fishway from Attractions Canada. It also shared in the Gold Level Reporter designation achieved by Yukon Development Corporation from the Voluntary Challenge & Registry Inc. for greenhouse gas emission tracking, reporting and reductions. Finally, Yukon Energy was presented with the Award of Excellence for Employee Safety from the Canadian Electricity Association.

All of these achievements were accomplished within a framework of fiscal prudence, which allowed Yukon Energy to avoid a General Rate Application to the Yukon Utilities Board for a sixth consecutive year.

We will continue to develop and deliver safe, reliable and cost-effective electricity to customers throughout the Yukon while following sound business practices and protecting the environment.

Yours sincerely,



Don Willems
President & Chief Executive Officer

104-00696/

# CONTENTS

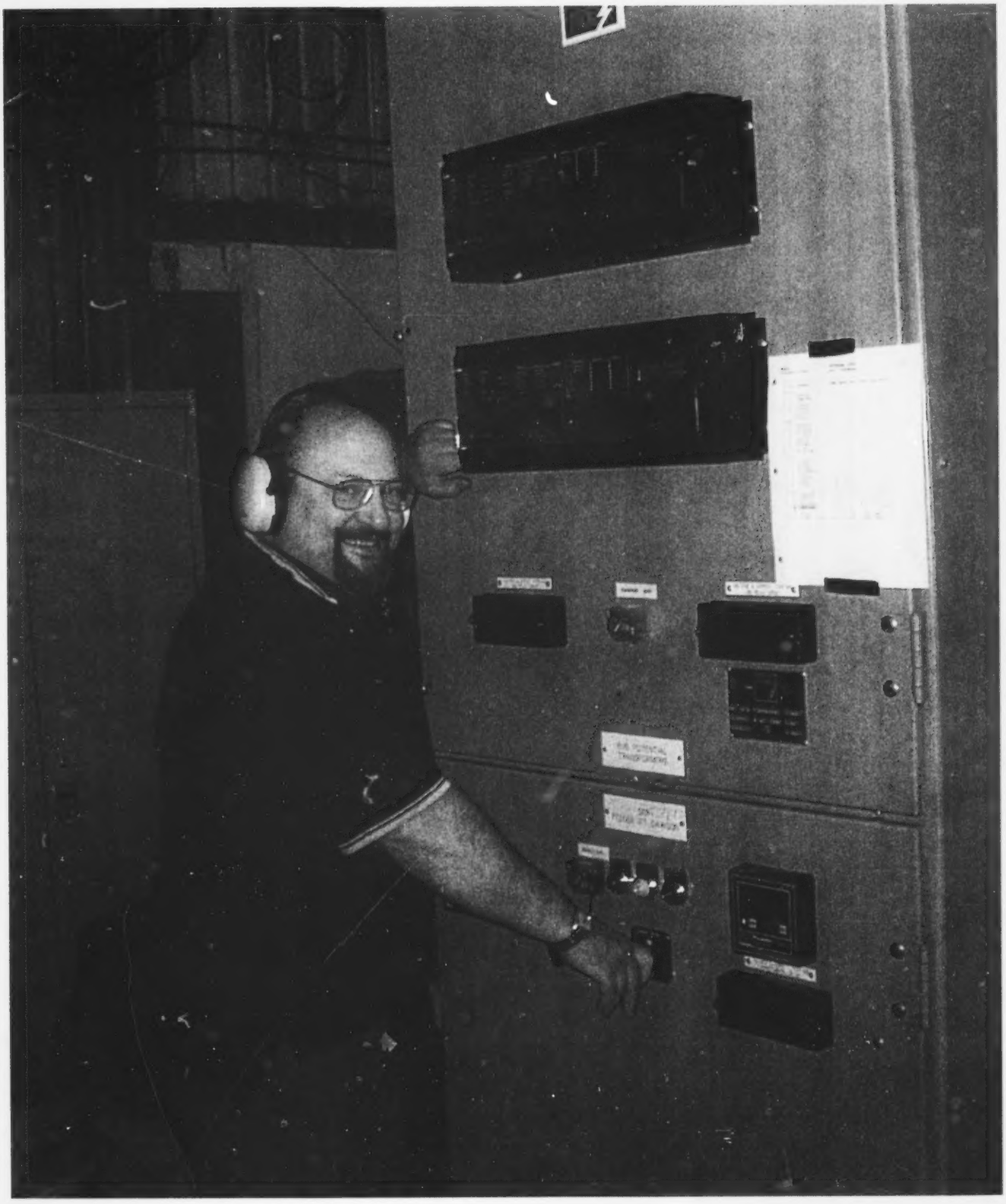
CORPORATE PROFILE. . . . . 1

THE YEAR IN REVIEW. . . . . 5

BOARD OF DIRECTORS & STAFF. . . . . 25

AUDITED FINANCIAL STATEMENTS. . . . . 29

PHOTOGRAPH CREDITS. . . . . 48



# CORPORATE PROFILE

Established in 1987, the Yukon Energy Corporation is an electrical public utility incorporated, franchised and regulated by the Business Corporations Act, the Public Utilities Act and the Yukon Water Act.

Governed by a Board of Directors appointed by the shareholder, Yukon Energy is a wholly owned subsidiary of Yukon Development Corporation (YDC).

The corporation is the primary generator and transmitter of electrical energy in the territory. It distributes electrical power to wholesale and industrial customers, and to retail customers in Dawson City, Faro, Mayo, Champagne and other rural areas throughout the territory.

Yukon Energy's generating capacity is approximately 116 megawatts (MW) of electricity, of which 75 MW are provided by hydro facilities located at Whitehorse Rapids, Mayo and Aishihik Lake. The remaining 39 MW is provided by diesel generators in Whitehorse, Faro, Mayo and Dawson City. Two wind turbines, located on Haeckel Hill near Whitehorse, generate 0.8 MW of electrical energy. The two turbines generate enough energy for 150 homes on an annual basis.

There are approximately 14,900 electricity consumers; 1,900 consumers, primarily located in and around Dawson City, Mayo and Faro, are served directly by Yukon Energy. Indirectly, the corporation serves all

Yukon communities receiving power from the Whitehorse-Aishihik-Faro grid through the Yukon Electrical Company Limited (YECL), including Whitehorse, Carcross, Carmacks, Haines Junction, Ross River and Teslin.

## VISION

Yukon Energy is a company providing reliable and cost-effective energy services for present and future customers throughout the Yukon.

## MISSION

We will provide a sufficient supply of safe, reliable electricity and related energy services to customers throughout the Yukon, now and in the future, while following sound business practices and demonstrating leadership in protecting the environment.

We undertake to:

- be responsive to our customers and their changing needs and expectations;
- commit to the safety and development of our employees;
- be cost-effective in the utilization and investment of resources, always remembering that we are spending the customer's money and making long-term decisions;

- place priority on the fundamentals; that is, safe and reliable electrical services;
- demonstrate the value of Yukon-based public ownership and management;
- act ethically and honestly treating employees, customers and others with fairness, dignity and respect;
- build enduring relations with Yukon First Nations.

## VALUES

Our leadership role, actions and activities are guided by a set of values based on:

- commitment
- integrity
- effective service
- learning, growth and development
- respect
- teamwork
- accountability

# THE YEAR IN REVIEW

## 2002 — HIGHLIGHTS

2002 was an extremely eventful year for Yukon Energy. We met a number of significant challenges and our employees can look back on this year with pride.

### Developing Infrastructure in the Yukon Territory

Yukon Energy's resources in 2002 were very much focused on building a new transmission line — the largest capital project undertaken in the history of the Corporation. The 230-kilometer line extends from the Mayo hydroelectric facility to Dawson City. Along with supplying the communities with renewable, non-greenhouse gas emitting electricity, the new line will result in a $CO_2$ emission reduction of approximately 11,321 tonnes per year. Estimated utility savings over the project's 40-year life are significant. The provision of cost-effective energy is also expected to support new regional economic development opportunities along the corridor.

The company was able to further cooperative relationships with the Nacho Nyak Dun and Tr'ondëk Hwëch'in First Nations involved in this project, through joint initiatives — including the implementation of specific benefit agreements.

As part of its goal to advance electrical infrastructure within the Territory, Yukon Energy, in partnership with its parent company, Yukon Development Corporation, also began work on corridor identification, technical feasibility and environmental assessment for transmission lines to other Yukon communities.

### Aishihik water license approved

The Aishihik facility has been in operation for 25 years, and supplies about 30% of the total hydro energy of the Whitehorse-Aishihik-Faro system. As an existing renewable and low cost energy resource, the Aishihik facility plays a central role in the provision of electricity to residential, business, industrial and other customers throughout the territory.

Aishihik is the alternative to diesel generation, which is much more costly and environmentally unfriendly.

In addition, the Corporation received an authorization from the Department of Fisheries and Oceans for the same 17-year period. This Fisheries Act Authorization (FAA) authorizes the alteration of fish habitat at Aishihik Lake during normal operations at Aishihik and Canyon Lakes. The FAA also includes provisions for monitoring fish populations at Aishihik Lake, to ensure the continuation of a healthy fish population. The agreement was a creative and constructive solution that balanced economic and environmental considerations.

The renewed water license, along with the compensation orders, and the FAA provides certainty to the Yukon ratepayers and affected residents and users of the lake for the next 17 years. Yukon Energy employees look forward to working with the Aishihik people, Champagne and Aishihik First Nations (CAFN), and other users of the lake as we proceed with implementation of long overdue, practical measures, such as a boat ramp, heritage site protection, and water supply to Aishihik Village. These mitigation measures will go a long way to addressing many of the historical grievances that have been associated with the original construction and operation of the facility.

Yukon Energy will also be working with the CAFN in the redevelopment of their traditional home at the north end of the village.

## Electricity rates

Electricity rates remained unchanged in 2002 due to ongoing cost controls that enabled Yukon Energy to avoid a rate application to the Yukon Utilities Board for the sixth consecutive year. The bill subsidy program known as the Rate Stabilization Fund is in place until March 31, 2005, which ensures that the current level of benefits will continue for residential, business and municipal consumers.

"In summary, I believe that Yukon Energy has taken a "value-based and balanced approach" to re-licensing this facility. We respect the importance of the environment and the importance of Aishihik Lake and the surrounding area that many individuals and groups attribute to it. It is important to consider the economic implications of operating the facility, but it is equally important to consider the quality of life that the lake brings."

Don Willems
President and CEO,
Yukon Energy

### Wind energy research and conference

Yukon Energy continued to advance the territory's wind energy regime in 2002. As part of ongoing energy supply planning, the corporation conducted a territorial commercial wind-monitoring program. As well, the Company is planning the "Yukon International Wind Energy Conference" to be held in Whitehorse, Yukon May 25-28th, 2003. The theme of the conference is "Cold Climate Opportunities." The aim of the conference is to bring together the supplier and client sides of the industry to explore and discuss difficult technical issues such as low temperature operating and icing of wind turbines that we face in northern climates.

## INFRASTRUCTURE AND CAPITAL PLANNING

### Mayo-Dawson City transmission line

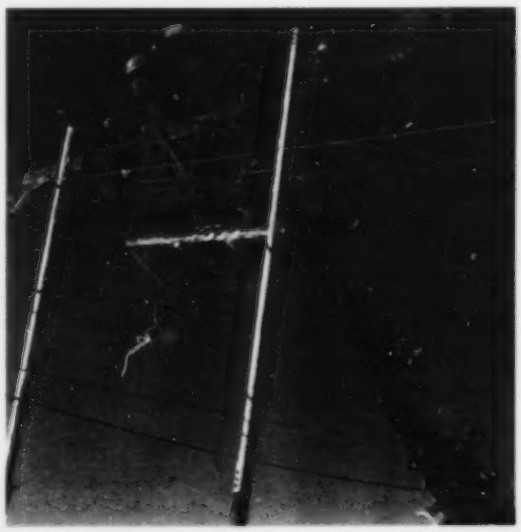
The project will displace primary diesel-generated electricity in Dawson City with surplus hydroelectricity from the Mayo generating station. Customers in Dawson City, Stewart Crossing and those along the highway will be served with renewable, non-greenhouse gas emitting electricity.

Estimated utility savings over the project's 40-year life are significant and up to 12,000 tonnes of greenhouse gases will be eliminated annually. As well, the provision of cost-effective energy is also expected to support new regional economic development opportunities along the corridor.

The construction of the transmission line progressed substantially in 2002. However, the project has not been without its challenges. The schedule for timber removal before line construction was tightened which added to the cost of this operation. In addition, the construction had to accommodate routing changes around the Dawson City airport due to a change in federal regulations. Yukon Energy also took the opportunity during construction to install additional infrastructure in the Hunker Creek area near Dawson City to provide service to customers presently without access to power.

***Maximizing local economic benefits***

Yukon Energy allocated significant resources to maximizing the local benefits of the Mayo-Dawson City transmission line project over the past year. The contract tender obliged all bidders to submit Yukon involvement plans and abide by the provisions of the benefit agreements struck with the Nacho Nyak Dun and Tr'ondëk Hwëch'in First Nations.



Additional points were awarded in the bid evaluation for the amount of Yukon and First Nation participation in the project, with the successful contractor proposing to spend a minimum of $4.5 million on local contracting and employment. To ensure Chant Construction meets or exceeds these commitments, penalties and incentives have been included in the contract. To date, $4.6m has been spent with the Tr'ondëk Hwëch'in and the Nacho Nyak Dun, and $4.1m with other local suppliers.

Chant Construction held a pre-hiring orientation and training workshop for the Nacho Nyak Dun and Tr'ondëk Hwëch'in early in 2002. As of December 31, 2002, the corporation had provided approximately 56,000 hours of local employment.

The benefit agreement with the Nacho Nyak Dun and Tr'ondëk Hwëch'in is consistent with the Chapter 22 provisions of the land claim agreements and provides priority to the First Nations for employment and contracting opportunities. It also created scholarship funds for beneficiaries, provides ongoing apprenticeships with Yukon Energy, and enables the Nacho Nyak Dun and Tr'ondëk Hwëch'in to obtain and remove salvageable timber.

A project oversight committee and a project steering committee, comprised of representatives from Nacho Nyak Dun, Tr'ondëk Hwëch'in, Yukon Development Corporation and Yukon Energy, convene regularly to monitor the implementation of the agreement and ensure that emerging issues are addressed.

## Carmacks-Stewart Crossing feasibility study

Yukon Energy, supported by YDC, is evaluating the extension of the transmission line from Carmacks to Stewart Crossing to tie the Whitehorse-Aishihik-Faro (W/A/F) electrical network into the soon-to-be commissioned Mayo-Dawson (M/D) transmission line.

The past year saw progress in terms of corridor identification, technical feasibility and environmental and cultural/heritage assessment for this potential transmission line. The project would integrate the territory's electrical networks to allow power to be generated and transferred at various points throughout the system. Aside from the economic and environmental benefits, the elimination of existing and future requirements for diesel-generated electricity in Pelly Crossing and elsewhere would improve long-term rate stability.

Though the transmission line may not be constructed for several years, beginning the planning component now will allow sufficient time for environmental assessment and permitting, and securing some form of land tenure.

This extension project is part of a larger goal to expand the Yukon's electrical energy network to eventually connect all Yukon communities and all electrical generating sources.

Yukon Energy will also continue to assess the feasibility of other grid connections to such communities as Watson Lake and Atlin as part of its ongoing infrastructure planning.

## Whitehorse Rapids Dam

As noted in last year's annual report, as part of the periodic monitoring program, Yukon Energy staff detected a small depression in the Whitehorse Rapids Dam in the spring of 2000. An independent dam safety specialist was hired to conduct a number of structural integrity

tests. The resulting report concluded the site should be monitored on an ongoing basis. Since that time, regular inspections indicate that no degradation has occurred. In addition, an independent dam safety review, conducted in accordance with the guidelines of the Canadian Dam Association, was completed in August 2000. The depression was noted in the review and ongoing monitoring was recommended. Yukon Energy continues to assess the situation and will take corrective action as required.

### Improvements to ensure reliability, safety and cost-effectiveness.

Despite the dominance of Mayo-Dawson line project, Yukon Energy's 2002 capital program delivered improvements to other areas of the company's operations.

As part of the periodic monitoring and testing required under the regulations of the Canadian Dam Association, Yukon Energy staff hired an independent dam safety specialist to conduct a safety review of the Mayo/Wareham generating facility in 2002. The result of this review was that Yukon Energy met and exceeded the standards and guidelines of the Canadian Dam Association.

Also, in 2002 an internal and external threat assessment was completed on the company's information system. As a result of this assessment, some minor issues will be addressed in 2003; however, no major security problems were encountered. Additional security measures were implemented primarily at the Whitehorse Rapids facility (main compound) and at the new warehouse location in Whitehorse.

### Maintaining our commitment to wind energy development

***Wind monitoring at Old Crow***

With no road access, Old Crow, located 128 kilometers north of the Arctic Circle, is the most isolated community in Yukon. Its 300 residents currently rely entirely on diesel generators

Published in 2002, this guide is the third in the series of attractions guides.

for electricity. The impacts of greenhouse gas emissions and climate change are a growing concern, particularly in northern Canada.

In 2002, Yukon Energy and the Vuntut Gwitchin First Nation agreed to jointly carry out a wind monitoring project in Old Crow. The objective of this project is to determine the feasibility of a wind-diesel hybrid generating system as a viable alternative to diesel generation. The Vuntut Gwitchin First Nation's support of the concept of wind generation is consistent with their strategy of developing viable economic ventures while protecting the environment of the north Yukon. The wind-monitoring program will augment earlier wind-monitoring efforts carried out between 1996 to 1999, and will specifically monitor the wind potential at an elevation of approximately 30m above ground level, an elevation typical of the height of suitable wind turbines. In addition, this project seeks to determine the potential for turbine blade rime icing in this location, and how this may affect the feasibility and design of any future wind power development.

The Vuntut Development Corporation and Yukon Energy (through support of its parent company Yukon Development Corporation) jointly funded this project, and the federal government agreed to match this funding. The project is 50% owned by the Vuntut Development Corporation.

The goal of all parties is to find ways to reduce the reliance on diesel generation, and maintain healthier, viable communities.

With the financial support and cooperation of Yukon Development Corporation, Yukon Energy continued to advance the territory's wind energy regime in 2002. The 660 kW Vestas turbine on Haeckel Hill completed its second year without significant difficulty while the 150 kW Bonus unit located at the same site continued to operate reliably. Rime icing on the turbine blades remains a barrier to increased performance though adaptations have substantially improved efficiency.

The development of wind energy is part of an ongoing commitment by Yukon Development Corporation to develop cost-competitive renewable energy sources with the technical assistance of Yukon Energy. Through these kinds of efforts, Yukon Energy has become a leader in wind energy technology in sub-arctic climates.

## MEETING OUR ENVIRONMENTAL RESPONSIBILITIES

### Environmental performance highlights for 2002 include

***Aishihik Lake re-licensing and compensation***

A comprehensive agreement for environmental mitigation and monitoring was reached between Yukon Energy, the Yukon government, Champagne and Aishihik First Nations (CAFN), the Department of Fisheries and Oceans, and the Department of Indian Affairs and Northern Development (DIAND) and was then presented to the board. Consensus was also achieved with DIAND on dam safety issues.

***Mayo hydro upgrading***

As part of ongoing upgrades at Yukon Energy facilities, a runner upgrade along with other essential maintenance work was performed on the 50-year-old hydro plant. Major work

consisted of installing new high capacity Frances turbines in order to increase the capacity of one hydro unit by 21 percent and the second unit by 11.5 percent. In conjunction with the runner upgrade, the bearings and the exciter were replaced and the rotor and stator were cleaned.

***VCR Gold Level Reporter status for the 2nd year***

For the second consecutive year, Yukon Energy, in partnership with the Yukon Development Corporation and the Energy Solutions Centre, received the Gold Level Reporter status by the Voluntary Challenge Registry (VCR Inc) for tracking, reporting and reducing carbon dioxide emissions. VCR Inc. is a non-profit partnership between industry and governments across Canada. It promotes and assesses the effectiveness of the voluntary approach to address climate change by managing a registry.

***Small hydro resource assessment***

The assessment of small hydro sites (1-20MW) was initiated by Yukon Energy in 2002. This program draws together information collected over many years into a single, comprehensive database. A methodology template was developed that allows comparison of hydro sites based on certain criteria, allowing sites to be ranked and prioritized in regions of the Yukon. This methodology template and the corresponding database will serve to identify sites that can be brought on line quickly in response to demand. Given the reliance on diesel generation in isolated communities, this program will be particularly useful in identifying small hydro opportunities in areas not presently served by the electrical grid.

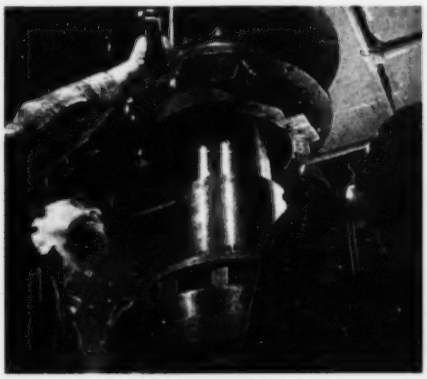
***Geothermal resource assessment***

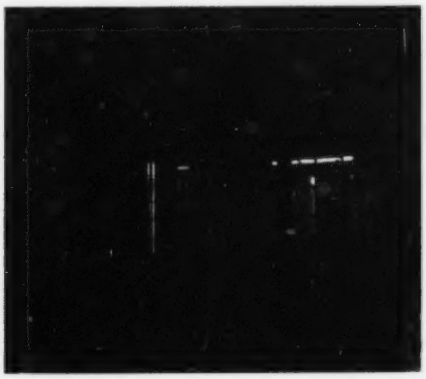
This year, Yukon Energy, in conjunction with the Energy Solutions Centre Inc, performed an assessment of the Yukon's earth energy potential. Unlike some other jurisdictions, the Yukon does not have a well log registry system. The goal of this project was to acquire, catalogue, and create a database of all relevant drill log information. As a result, we are now able to assess the groundsource heat potential for all regions of the Yukon. The finished product will support the assessment of the heat potential within all community boundaries and set the stage for a well log registry for the Yukon.

***Redevelopment planning for the Whitehorse Fishway***

Yukon Energy, in partnership with the Yukon Development Corporation completed a conceptual plan to redevelop the Whitehorse Fishway. Featuring the longest wooden fish ladder in the world, the Fishway is located at the Whitehorse Generating facility on the Yukon River.

Originally established to allow passage of salmon and other fish past the dam to spawning grounds upstream, the Fishway has become one of the City's most popular tourist attractions. Recognizing the tremendous opportunity to





redevelop the Fishway and surrounding area as a major attraction, Yukon Energy initiated a planning and redevelopment process that involves many interested stakeholders.

Ideas for the redevelopment were solicited from local governments, First Nations, community and recreational groups. A conceptual plan has been prepared that incorporates many of the themes and ideas gathered through this consultation process. Yukon Energy's operation and support of the Fishway redevelopment demonstrates continued leadership in environmental stewardship.

***Southern Lakes land-cover and waterfowl inventory project***

Yukon Energy is one of several partners with Ducks Unlimited that has undertaken a 3-year program to extensively map vegetation cover and inventory waterfowl in the Southern Lakes region of the Yukon. This region is the most heavily populated area of the Yukon and land-use pressures are increasing as many demands are placed on the land and resources. The area includes the watershed that supports the Whitehorse Rapids hydro generating station. The goal of this project is to develop a reliable baseline inventory of wetlands and waterfowl use in the Southern Lakes. Land and resource managers will use the information to make informed and responsible land management decisions.

***Millennium Trail completed; footbridge planned***

Yukon Energy, the City of Whitehorse and the Yukon Council on Disability completed the development and construction of the Whitehorse Millennium Trail around the perimeter of the Yukon River in Whitehorse in 2002. The second phase of this project will entail the construction of a footbridge over the Yukon River in 2004. The 6-km paved trail winds along the banks of the river and past the Whitehorse hydro generating station, the Fish Ladder and the Whitehorse Rapids Fish Hatchery. This trail, accessible to all, will showcase many geological and other natural features along the trail. This project demonstrates Yukon Energy's commitment to support appropriate community-

based projects through partnering, consistent with its broad environmental management objectives.

The Millennium Trail complements other walks located nearby at Schwatka Lake, Miles Canyon and Canyon City, important stops for the Klondike gold rush stampeders on their way to Dawson City. To improve public awareness of these walks and an understanding of its operations, Yukon Energy commissioned two guiding booklets (Enjoying Whitehorse Trails and Exploring the Whitehorse Fishway, both published in English, French and German) and two publications (The Power of Water and The Winds of Change).

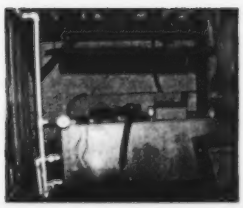
***Whitehorse Rapids Fishway — Attractions Canada Award***

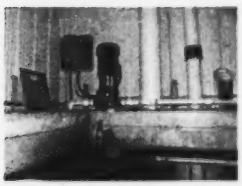
Yukon Energy also maintained its sponsorship of the Yukon Fish and Game Association to operate the Whitehorse Fish Ladder, one of the longest wooden fish ladders in the world.

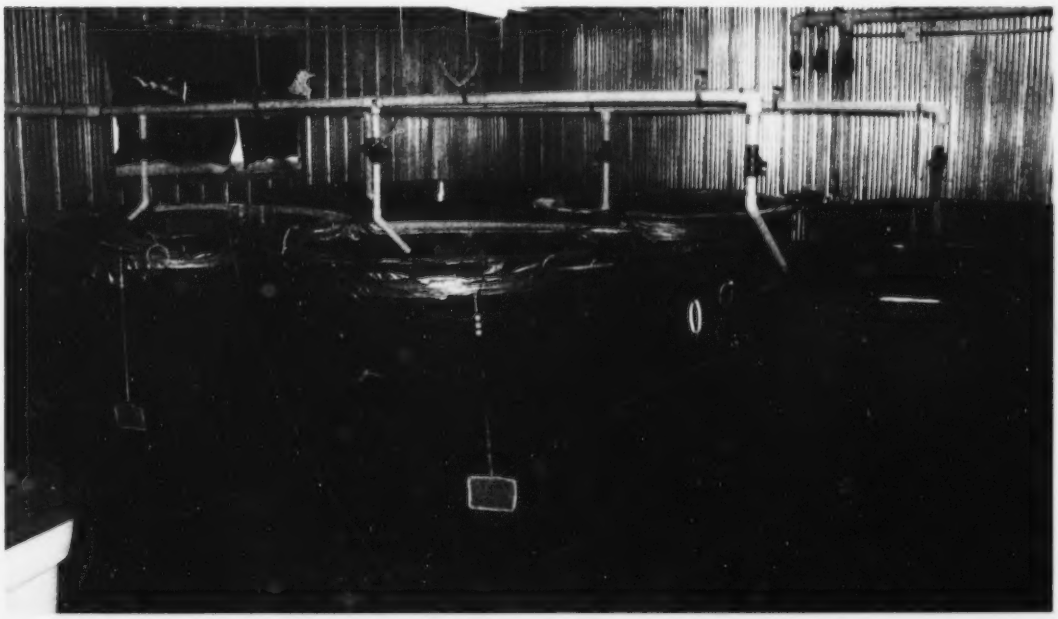
In 2002, Yukon Energy was the proud recipient of the Territorial Attractions Canada Award for its Whitehorse Rapids Fishway under two categories: Natural Outdoor Site and Attraction

of International Interest. The fish ladder and viewing facility was built in 1959 as part of the construction of the Whitehorse Rapids Dam, and is believed to be the longest wood fish ladder in the world. Each year, the Fishway attracts over 35,000 visitors from all over the world.

Significant capital improvements were completed in 2002 at the Whitehorse Rapids Fish Hatchery. As part of Yukon Energy's ongoing efforts to be more efficient in its use of resources, a ground source heat pump was installed in December. The Yukon Territorial Government supported this project.







based projects through partnering, consistent with its broad environmental management objectives.

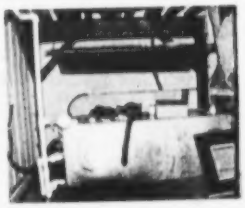
The Millennium Trail complements other walks located nearby at Schwatka Lake, Miles Canyon and Canyon City, important stops for the Klondike gold rush stampeders on their way to Dawson City. To improve public awareness of these walks and an understanding of its operations, Yukon Energy commissioned two guiding booklets (Enjoying Whitehorse Trails and Exploring the Whitehorse Fishway, both published in English, French and German) and two publications (The Power of Water and The Winds of Change).

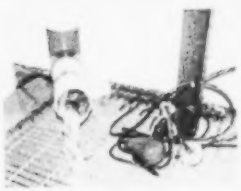
***Whitehorse Rapids Fishway — Attractions Canada Award***

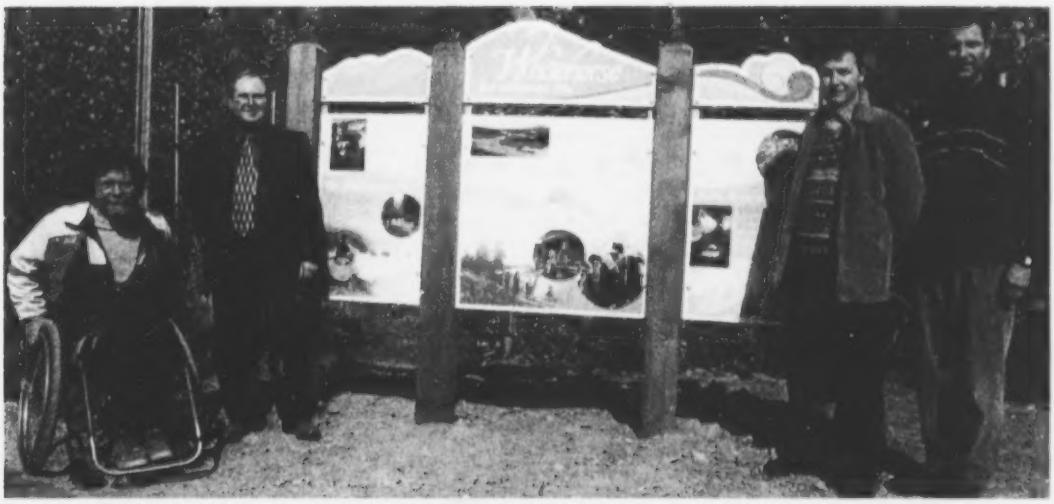
Yukon Energy also maintained its sponsorship of the Yukon Fish and Game Association to operate the Whitehorse Fish Ladder, one of the longest wooden fish ladders in the world.

In 2002, Yukon Energy was the proud recipient of the Territorial Attractions Canada Award for its Whitehorse Rapids Fishway under two categories: Natural Outdoor Site and Attraction of International Interest. The fish ladder and viewing facility was built in 1959 as part of the construction of the Whitehorse Rapids Dam, and is believed to be the longest wood fish ladder in the world. Each year, the Fishway attracts over 35,000 visitors from all over the world.

Significant capital improvements were completed in 2002 at the Whitehorse Rapids Fish Hatchery. As part of Yukon Energy's ongoing efforts to be more efficient in its use of resources, a ground source heat pump was installed in December. The Yukon Territorial Government supported this project.







The hatchery uses the 6°C groundwater underlying the City of Whitehorse as the water supply for the fish tanks. Groundwater provides the ideal water supply for the raising of fish in that it has a constant year-round temperature, it is free of surface water contaminants and is characterized by low turbidity. The water is pumped from a nearby well and circulated through the egg trays and fish tanks. An open loop, water to air heat pump was designed and installed to utilize the water before it is circulated through the fish tanks.

For many years, the hatchery has been heated with a propane heating system. The heat pump has displaced the use of most of the propane and is expected to produce cost savings on building heating of $5000 per year. The propane heating system now serves only as a backup heating source. An additional benefit of installing the heat pump is that the power used for the heat pump is purchased at the relatively inexpensive "secondary sales" rate. Not only is Yukon Energy displacing propane emissions, but the electrical power for the heat pump is also being generated with water that would otherwise be spilled. The staff at the hatchery reports that the building is more comfortable to work in, especially during the Yukon's colder winter months.

Annual propane usage at the hatchery has been tracked since 1999, so the associated greenhouse gas emissions can be calculated back to that year. We expect future emissions from the fish hatchery to be reduced on an ongoing basis.

The 2002 egg take at the hatchery was 202,000, which will result in a 2003 spring release of 170,000 fry.

***Renewable Power Sales Incentive Program***

The corporation contributed to the delivery of the Renewable Power Sales Incentive Program in partnership with Yukon Development Corporation and the Energy Solutions Centre. This initiative provides for surplus hydroelectricity from the Whitehorse-Aishihik-Faro grid to be sold at a discounted rate to commercial and institutional customers for space and/or hot water heating. The competitive price enables participants to reduce their energy costs by using renewable energy to displace fossil fuel heating. The program also allows the use of geothermal energy in conjunction with heat pumps and solar energy. The client's buildings are fitted with dual systems so that electric (when there is a surplus of hydro-power), solar, or geothermal energy can be used.

This program provides Yukon Energy with a greater return on its capital investment through the sale of additional renewable power. At the same time, commercial and institutional customers benefit from lower heating costs, and Yukoners in general benefit from the contribution to long-term electrical rate stabilization and reduced greenhouse gas emissions. As a result of this program, the volume of secondary sales quadrupled from 2 GwH in 2001 to 8 GwH in 2002. In 2002, seven buildings were converted to this program, thereby eliminating over 770 tonnes of $C0_2$ emissions annually.

In our efforts to reduce our environmental impact, we calculated total greenhouse gases emitted since 1990, estimated emissions in the future, and set targets and established clear future performance indicators and methods to reach these targets. The results indicate that carbon dioxide emissions decreased by 66% or 22,980 tonnes during this period. The companies are dedicated to maintaining this success over the next decade despite a potential load growth of up to 36%.

***ISO 14001***

Though modest in its size and complexity in comparison to some of the larger utilities that operate in southern Canada, Yukon Energy is determined to perform to an environmental standard consistent with those set out in the ISO 14001 procedures. As a first step in achieving compliance with the ISO 14001 Environmental Standards of Performance, Yukon Energy has developed a corporate Environmental Management System (EMS) for all aspects of its business. The purpose of this is to ensure we operate in an environmentally responsible manner, in compliance with all environmental laws and regulations.

The next step in this process is to develop an Environmental Improvement Action Plan in order to make priorities and to address opportunities for improvement.

## EMISSIONS TRADING

Consistent with board approval for the Mayo-Dawson City transmission line, Yukon Energy collaborated with its parent company to market greenhouse gas emission credits as a result of the project. Emission credits are usually based on energy no longer required to be produced from fossil fuels due to displacement or efficiencies. For example, eliminating diesel-generated power in Dawson City by substituting it with surplus hydroelectricity from the Mayo generating station is expected to produce carbon dioxide emission credits of between 7,000 to 16,600 tonnes annually depending on electricity demand. The credits are sold or traded to companies that are unable to reduce their fossil fuel emissions but may want or be required to decrease their greenhouse gases in the future.

Although emissions trading remains an emerging market, Yukon Energy expects that greenhouse gas credits will be a highly valued commodity within a regulated environment. This is because climate change has become an increasingly important issue for national

| EMISSIONS | | 2002 | 2001 | 2000 |
|---|---|---|---|---|
| Carbon dioxide ($CO_2$) | Total gross annual $CO_2$ emission (tonnes) | 11,922 | 10,302 | 10,912 |
| | Mass gross $CO_2$ emitted per unit of net fossil generation (kg/kWh) | 0.91 | 0.86 | 0.79 |
| | Mass gross $CO_2$ emitted per unit of net system generation (kg/kWh) | 0.044 | 0.039 | 0.042 |
| | Mass net $CO_2$ emitted per unit of net fossil generation (kg/kWh) | 0.91 | 0.86 | 0.79 |
| | Mass net $CO_2$ emitted per unit of net system generation (kg/kWh) | 0.044 | 0.039 | 0.042 |
| Sulphur dioxide ($SO_2$) | Total gross annual $SO_2$ emission (tonnes) | 27.5 | 25.7 | 27.20 |
| | Mass gross $SO_2$ emitted per unit of net fossil generation (g/kWh) | 2.09 | 2.15 | 1.97 |
| | Mass gross $SO_2$ emitted per unit of net system generation (g/kWh) | 0.10 | 0.10 | 0.10 |
| | Mass net $SO_2$ emitted per unit of net fossil generation (g/kWh) | 2.09 | 2.15 | 1.97 |
| | Mass net $SO_2$ emitted per unit of net system generation (g/kWh) | .010 | 0.10 | 0.10 |
| Nitrogen oxides ($NO_x$) | Total gross annual $NO_x$ emission (tonnes) | 197.4 | 184.3 | 195.2 |
| | Mass gross $NO_x$ emitted per unit of net fossil generation (g/kWh) | 15.03 | 15.42 | 14.14 |
| | Mass gross $NO_x$ emitted per unit of net system generation (g/kWh) | 0.72 | 0.69 | 0.74 |
| | Mass net $NO_x$ emitted per unit of net fossil generation (g/kWh) | 15.03 | 15.42 | 14.14 |
| | Mass net $NO_x$ emitted per unit of net fossil generation (g/kWh) | 0.72 | 0.69 | 0.74 |

governments and the subject of international agreements.

The emission credits from the Mayo-Dawson City transmission line project were packaged into a prospectus and targeted to a select group of Canadian energy companies. This resulted in negotiations commencing with a Western Canadian utility in the third quarter. These discussions were ended in the fourth quarter after an impasse was reached and the market value of the credits increased due to Canada signing onto the Kyoto accord. As a result these emission credits are being retendered in 2003.

## OTHER ACTIVITIES

An abridged audit of Yukon Energy's occupational health and safety policy, program and practices was completed by an independent auditor was done in 2001. This work led to the development in 2002 of a new health and safety action plan that establishes priorities and specific tasks for the next four years.

## CORPORATE CITIZENRY

### Helping to build and support strong Yukon communities

Yukon Energy continues its commitment to corporate stewardship and citizenry by actively participating in community events and sponsoring non-profit organizations. Through its corporate contributions program, over $75,000 was allocated to 81 community groups in 2002.

In cooperation with the Yukon Development Corporation and the Energy Solutions Centre, the corporation was a primary contributor to the highly successful Yukon Science Fair and Yukon Energy Fair for the second year in a row.

A concentrated effort is made to educate students on the career opportunities in the energy industry, and employees attended several career fairs at the local high schools in Whitehorse and Dawson City to talk to students and share their experiences.

Yukon Energy staff actively participated in community events including the Lions Trade Show, Dawson City Gold Show, United Way Campaign, Skills Canada, the City of Whitehorse Sneaker Day and the NMI Charity Golf Classic for Big Brothers and Big Sisters

as well as the Peter Gzowski Invitational Tournament for Literacy. Employees also served on the board of directors of the Yukon Chamber of Commerce, Whitehorse Chamber of Commerce, other community Chambers of Commerce, the Town of Faro Council, the Yukon Arts Centre Foundation, the Rotary Clubs and the Kinsmen Club of Yukon. Yukon Energy is also a member in good standing of these organizations as well as the Association of Professional Engineers (Yukon Territory), and the First Nations Tourism Association.

Yukon Energy donated computers for the second year to Teegatha' Oh Zheh Society, an organization which helps adults with learning disabilities to reach their full potential.

Yukon Energy's senior management team continued to support the Executive Sponsorship Program, which was implemented in 2001. This initiative has been successful in fostering a greater understanding about the corporation with stakeholders and has helped to build support for its current and planned initiatives. The program enables the Corporation to better understand the goals, objectives and challenges of these stakeholders' business so that concerns can be quickly reported and acted upon by senior management.

## Fostering scholastic and community excellence

Yukon Energy and Yukon Development Corporation are publicly owned and locally operated energy companies. The corporations are committed to the people and communities they serve, and to contributing to a sustainable Yukon economy. To this end, we provide several scholarship opportunities for Yukon students.

### *Yukon Energy scholarship*

Yukon Energy continues to provide the Yukon Energy Scholarship, in partnership with the Yukon Development Corporation. This two-year scholarship of $4,000 is available to all Yukon residents studying full-time at a post-secondary institution in Canada or Alaska. Students must be pursuing studies in the sciences, engineering, technologies, business administration, commerce or economics, or related areas. For two

## LONG SERVICE AWARDS, 2002

The following individuals reached employment milestones in 2002:

Les Rowland, 15 years
Guy Morgan, 15 years
Bill Haydock, 5 years
Dave Wray, 5 years
Dave Moline, 5 years
Jack Weir, 5 years

consecutive years, evaluations consider academic performance and community citizenship.

Yukon Energy was pleased to present the 2002 scholarships to Amy Darling and Peter Brown, both from Whitehorse, for their first year of studies, and to Brett Stevenson of Whitehorse, and Stephen Kirkham of Faro for their second year of studies.

### Two-year scholarship

**2001-2002**
Brett Stevenson
Stephen Kirkham

**2002-2003**
Amy Darling
Peter Brown

### Annual scholarship

**2002-2003**
**Nacho Nyak Dun First Nation**
Lisa Rear
Lindsay Rear
Erin Wallingham

**2002-2003**
**Tr'ondëk Hwëch'in First Nation**
Melanie Carr (with her children)
Alex Kormendy
Tricia McDiarmid (no picture)

***Nacho Nyak Dun and Tr'ondëk Hwëch'in scholarships***

Yukon Energy introduced two new scholarship programs in 2002 — one for each of the First Nations of Nacho Nyak Dun and Tr'ondëk Hwëch'in as part of the Mayo/Dawson Transmission Line Project. These awards consist of an annual scholarship of $100 per course to a maximum of $1,000 per student. The company awarded scholarships to six outstanding post-secondary First Nations students last year. These were Lisa Rear, Lindsay Rear, and Erin Wallingham of the Nacho Nyak Dun First Nation, and Melanie Carr, Alex Kormendy, and Tricia McDiarmid of Tr'ondëk Hwëch'in First Nation

## Yukon Energy wins award of excellence for employee safety

For over thirty years, the Canadian Electricity Association (CEA) has tracked the employee safety record of its member utilities. Annually the President's Award of Excellence for Employee Safety is presented to members who have demonstrated superior safety performance in the past year. By promoting safety, this award has assisted CEA members in meeting their objectives of accident reduction and overall performance.

To receive the President's Award, a reporting utility must be ranked within the top quartile of their grouping for both All Injury Frequency and Severity rates. There are three award levels: Bronze for the companies who meet the award criteria for the given year; Silver for meeting the criteria two consecutive years; and Gold for three or more consecutive years.

## YUKON ENERGY DONATIONS, 2002

Alsek Music Festival Society
Anvil Range Arts Society
Association of Yukon Communities
Canadian Bar Association
Canadian Police Association
Critters Creative Dayhome
Dawson City Arts Society
Dawson City Fire Department
Dawson City Girl Guides
Dawson City Minor Soccer
Dawson Music Festival
Dawson Shelter Society
Del Van Gorder School
Duke of Edinburgh Society
Energy Whizzkids Club of Yukon
Faro Air Cadets
Faro Swim Team
Faro T-Ball
Farrago Music Festival
Great Northern Ski Society
Guild Society
Interagency Committee
Junior Boys Curling Team
Klondike Institute of Art & Culture
Klondyke Centennial Society
Learning Disabilities Association of Yukon
Longest Night Society
Mayo Carnival Society
Mayo Curling Club
Mayo Fly By Night Club
Mayo Ranger Patrol
Mayo Soccer Club
Mayo Volunteer Fire Department
Midnight Sun Kickers
Midnight Sun Pipe Band
Nakai Theatre
North Yukon Eagles Hockey Club
Northern Lights School of Dance
Paddlers Abreast
RCMP Bike Rodeo
Robert Service School
Rose Mountain Skating Club
Run For Mom
Slow Pitch League
Sport Yukon
Squash Yukon
Substance Abuse Prevention Coalition
Town of Faro
Village of Mayo
Watson Lake Curling Club
Whitehorse Baseball
Whitehorse Curling Club
Whitehorse Rodeo Association
Whitehorse Taekwan-Do Association
Women's Experimental Theatre
Youth of Today Society
Yukon Amateur Boxing Association
Yukon Arts Centre
Yukon Arts Society
Yukon Canoe & Kayak Club
Yukon College
Yukon Conservation Society
Yukon Dart Association
Yukon Energy Scholarship Fund
Yukon Film Society
Yukon First Nation Tourism Association
Yukon Historical & Museums Association
Yukon Icebreakers
Yukon Indigenous Games Steering Committee
Yukon Learn
Yukon River Trail Marathon
Yukon Sourdough Rendezvous
Yukon Storytelling Festival
Yukon Summer Music Camp

## YUKON UTILITIES BOARD ORDERS

The Yukon Utilities Board did not issue any orders affecting the business and affairs of Yukon Energy in 2001.

## CHALLENGES FOR 2003

Yukon Energy has a leading role to play in sustainable energy development for the territory. Critical to our success will be gaining credibility among customers and other key stakeholders, demonstrating that the Company is fiscally responsible and operating on the basis of sound business practices.

Next year will see a focused effort on increasing the customer base and enhancing revenues through the promotion of primary and secondary sales and actively supporting YDC programs and Yukon Government initiatives to attract investment from outside the territory. Another challenge will be integrating and optimizing the operation of the Mayo Dawson System into the Whitehorse system control centre. Yukon Energy will continue to operate in an environmentally responsible manner, completing the development of an ISO 14001 compliant corporate environmental management system, in accordance with CEA requirements.

One particularly significant challenge in 2003 will be to develop an integrated strategic planning framework to guide long-term planning and infrastructure development. Moving towards a matrix-planning environment will help ensure that the Corporation is properly organized to fulfill their mandate in a responsible and accountable manner. Key performance indicators will also be implemented to measure operational efficiency, and to provide additional data to use in the day-to-day operations of the company.

It will continue to be important to build the profile of the Corporation in line with the objective of becoming "increasingly visible as a significant player in the Territory's energy sector." Yukon Energy will make every effort to get to know the players in the new government and continue to work with regulatory authorities, community and business leaders and First Nations to facilitate a broad understanding of the utility business. The Corporation will be hosting the first "Yukon International Wind Conference" in May 2003, in partnership with the Energy Solutions Centre and the Pembina Institute.

## SUMMARY OF UTILITY OPERATIONS

| | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 |
|---|---|---|---|---|---|---|
| **Generating capacity (in MW)** | | | | | | |
| Hydro | 75 | 75 | 75 | 75 | 75 | 75 |
| Diesel | 40 | 40 | 40 | 45 | 45 | 45 |
| Wind | 1 | 1 | 1 | 0 | 0 | 0 |
| **Total** | **116** | **116** | **116** | **120** | **120** | **120** |
| **Peak demand (in MW)** | | | | | | |
| WAF system | 47 | 51 | 48 | 51 | 54 | 67 |
| Mayo | 3 | 3 | 3 | 3 | 3 | 3 |
| Dawson | 3 | 3 | 3 | 3 | 3 | 3 |
| **Total** | **53** | **57** | **54** | **57** | **60** | **73** |
| **Generation (in GWh)** | | | | | | |
| Whitehorse Rapids | 169 | 141 | 187 | 195 | 190 | 183 |
| Aishihik | 86 | 107 | 56 | 38 | 63 | 59 |
| Mayo | 7 | 8 | 9 | 10 | 11 | 11 |
| Wind | 1 | 1 | 0 | 0 | 0 | 0 |
| WAF diesel | 1 | 0 | 1 | 12 | 7 | 82 |
| Other diesel | 15 | 15 | 15 | 15 | 15 | 14 |
| | **279** | **272** | **268** | **270** | **286** | **349** |
| **Electric sales (in $000)** | | | | | | |
| Residential | 1,359 | 1,288 | 1,325 | 1,372 | 1,519 | 1,555 |
| General service | 2,094 | 1,963 | 1,954 | 1,959 | 2,045 | 1,978 |
| Industrial | 74 | 128 | 154 | 205 | 1,332 | 7,542 |
| Wholesale | 20,109 | 18,685 | 18,883 | 19,357 | 19,568 | 15,432 |
| Other | 80 | 75 | 72 | 288 | 70 | 1,149 |
| | **23,715** | **22,138** | **22,388** | **23,181** | **24,534** | **27,656** |
| **Electric sales (MWh)** | | | | | | |
| Residential | 9,662 | 9,564 | 9,887 | 10,321 | 11,403 | 12,796 |
| General service | 12,829 | 12,547 | 12,426 | 12,390 | 12,981 | 13,561 |
| Industrial | 884 | 2,128 | 2,922 | 3,692 | 18,105 | 80,818 |
| Wholesale | 228,993 | 222,396 | 221,329 | 223,643 | 222,958 | 222,508 |
| Other | 269 | 261 | 240 | 227 | 224 | 233 |
| | **252,637** | **246,896** | **246,804** | **250,273** | **265,671** | **329,916** |
| **Cents per kWh** | | | | | | |
| Residential | 14.07 | 13.46 | 13.41 | 13.29 | 13.33 | 12.15 |
| General service | 16.32 | 15.64 | 15.72 | 15.81 | 15.75 | 14.59 |
| Industrial | 8.39 | 6.00 | 5.28 | 5.56 | 7.35 | 9.33 |
| Wholesale | 8.78 | 8.40 | 8.53 | 8.66 | 8.78 | 6.94 |
| Other | 29.57 | 28.70 | 30.06 | 126.91 | 31.48 | 493.94 |
| **Overall** | **9.39** | **8.97** | **9.07** | **9.26** | **9.23** | **8.38** |

# OPERATIONS AND FINANCIAL REVIEW

## Management Discussion

In 2002, revenue increased by $1.6 million (7.0%) from 2001 primarily as a result of higher secondary sales and the accounting treatment of a component of billed power sales.

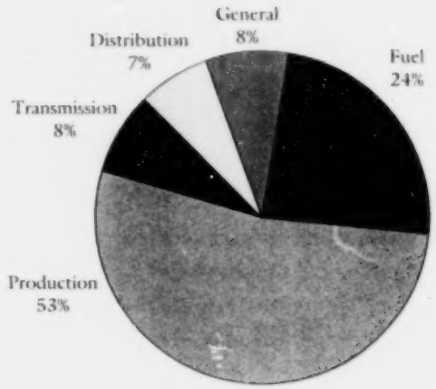
Administration expenses increased by $1.1 million (21%) from 2001. The largest single contributing factor was a rise in insurance costs of over $400,000. Other increases were due to higher costs related to employee recruitment, regulatory issues, as well as corporate contributions, such as those related to the development of the Millenium Trail and new scholarships funds.

Finance expense decreased by $428,000 (11%) from 2001 as a result of repaying $10 million of long-term debt held by the corporation's parent using available cash on hand.

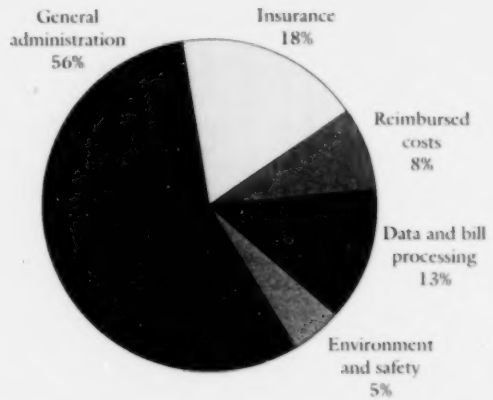
Capital expenditures totaled $26.9 million in 2002 net of customer contributions of which $19.4 million related to the Mayo-Dawson City transmission project. Of the remaining $7.5 million, $4.8 million related to generation projects, $1.9 million related to general plant and equipment and the remainder to transmission and distribution projects.

The net book value of capital assets at December 31, 2002 is $144.4 million. During the year, the corporation commissioned an independent appraisal of its' assets for insurance purposes. The cost to reproduce or replace Yukon Energy's assets was calculated to be approximately $600 million.

Operations and maintenance expenditures
$5,295,000




Administration expenditures
$6,378,000

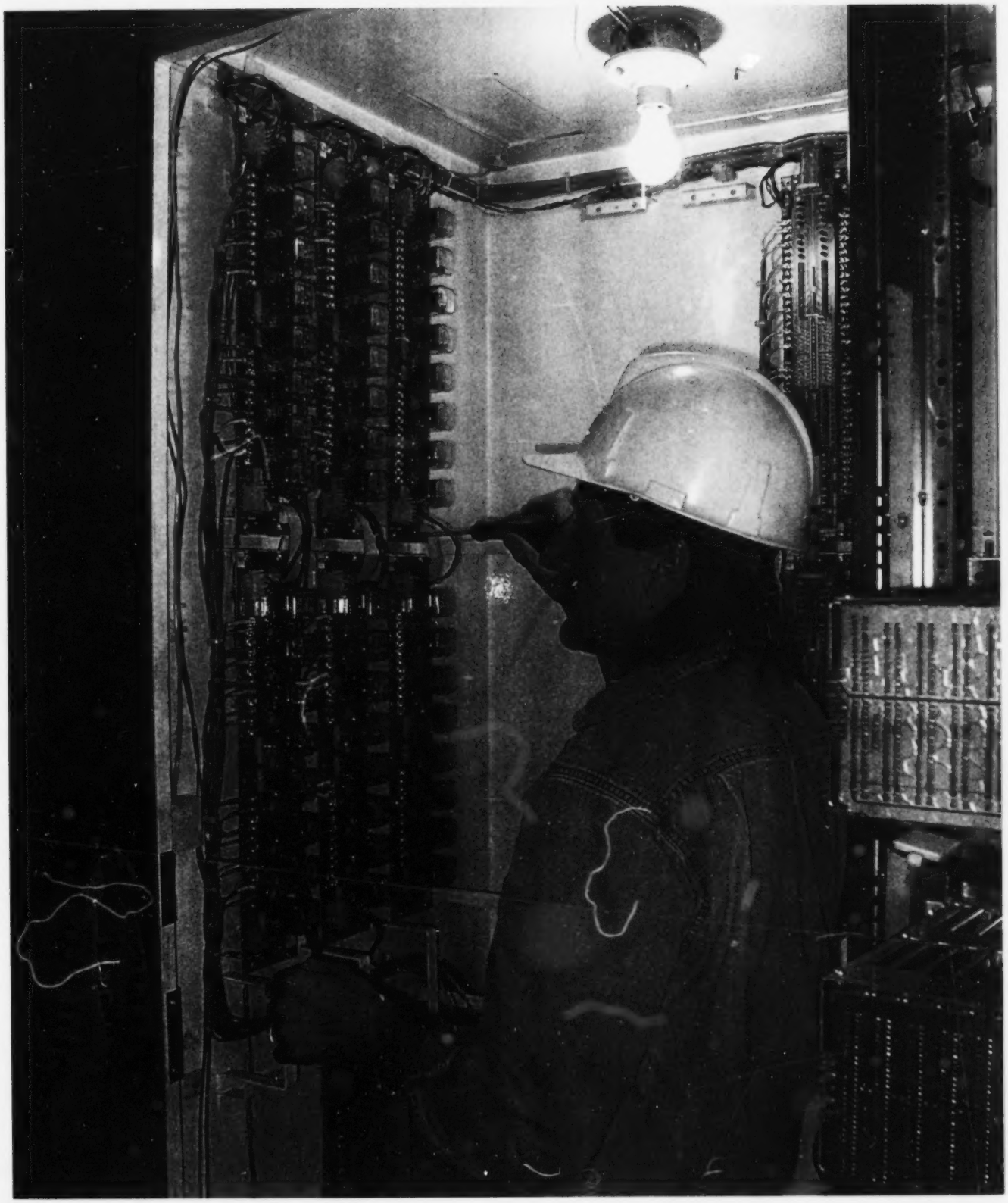


## FINANCIAL SUMMARY

(in $000s)

| | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 |
|---|---|---|---|---|---|---|
| **REVENUE** | | | | | | |
| Sales of power | 23,786 | 22,242 | 22,386 | 23,181 | 24,534 | 27,656 |
| Recovery of costs (Note 1) | 539 | 513 | 894 | – | – | – |
| Other | 238 | 190 | 149 | 196 | 59 | 4,331 |
| | **24,563** | **22,945** | **23,429** | **23,377** | **24,593** | **31,987** |
| **EXPENSES** | | | | | | |
| Administration | 4,723 | 4,079 | 3,688 | 3,626 | 3,676 | 3,704 |
| Insurance | 1,166 | 748 | 660 | 661 | 662 | 488 |
| Operations and maintenance | 4,036 | 3,871 | 4,099 | 4,298 | 3,789 | 5,615 |
| Fuel | 1,259 | 1,337 | 1,314 | 1,316 | 2,154 | 8,361 |
| Recoverable costs (Note 1) | 539 | 513 | 894 | – | – | – |
| Bad debt write-offs | – | – | 3,155 | – | – | – |
| Amortization | 5,536 | 5,249 | 4,954 | 5,042 | 4,816 | 5,656 |
| Finance charges, net | 3,473 | 3,901 | 3,727 | 3,945 | 4,641 | 5,757 |
| | **20,732** | **19,698** | **22,491** | **18,888** | **19,738** | **29,581** |
| **NET INCOME** | **3,831** | **3,247** | **938** | **4,489** | **4,855** | **2,406** |
| **CAPITAL ASSETS** | | | | | | |
| At cost (net of contributions) | 193,874 | 167,966 | 159,980 | 154,424 | 144,058 | 140,642 |
| less: accumulated depreciation | 49,453 | 44,920 | 40,530 | 36,410 | 33,043 | 29,456 |
| **Net book value** | **144,421** | **123,046** | **119,450** | **118,014** | **111,015** | **111,186** |
| **Capital expenditures (net of contributions)** | 26,866 | 8,538 | 4,756 | 11,326 | 3,984 | 1,741 |
| Utility return on equity achieved | 8.79% | 7.87% | 7.92% | 9.13% | 9.11% | 4.55% |
| Utility return on equity allowed | 9.14% | 9.14% | 9.14% | 9.14% | 9.14% | 9.45% |

Note 1: Recovered costs are from the corporation's parent and as part of an insurance claim.



# BOARD OF DIRECTORS
## & staff

Yukon Energy Corporation
P.O. Box 5920, Whitehorse, Yukon Y1A 6S7
phone: (867) 393-5300, toll free in the Yukon: 1-877-712-3375, fax: (867) 393-5323
e-mail: info@yec.yk.ca , website: www.yec.yk.ca

### Board of Directors

Chair
Lorne Austring

Directors
Shirley Abercrombie
Martin Allen
Fred Blanchard
Ed Chambers
Carl Charlie
Pat Irvin

### Officers & Senior Management

President and Chief Executive Officer
Don Willems

Corporate Secretary
Rod Snow

Director of Technical Services
John Maissan

Director, Operations
Dave Wray

Director, Business Development & Resource Planning
Hector Campbell

Director, Health, Safety & Environment
Les Boisvert

Manager, Human Resources
Linda Greer

Chief Financial Officer
Erik Hoenisch

Controller
Wendy Fendrick

### Committees

**HUMAN RESOURCES**

Chair
Lorne Austring

Member
Pat Irvin

**AUDIT**

Chair
Pat Irvin

Members
Carl Charlie
Lorne Austring

**CORPORATE CONTRIBUTIONS**

Chair
Fred Blanchard

Member
Don Willems

### Auditor

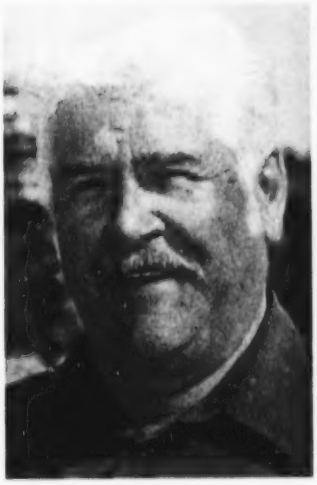
Auditor General of Canada

**Lorne Austring, Chair and Director**

Mr. Austring is a Whitehorse lawyer and partner in the law firm of Austring, Fendrick, Fairman & Parkkari where he practices corporate and commercial law. He has been on the board since September 2001 and was appointed chair in May 2002.

**Shirley Abercrombie, Director**

Ms. Abercrombie has extensive field experience in the natural resource sector and has worked for both industry and government in a number of capacities. She is currently managing the Integrated Resource Policy unit within the Yukon's Department of Energy, Mines and Resources and has been a board member since November 2002.



**Martin Allen, Director**

Mr. Allen is the owner of L & T Holdings, a Yukon electrical business. He resides in Whitehorse and has worked in the Yukon in the electrical field for over 30 years both in the commercial and private sector. He was appointed to the board in August 2002.

**Fred Blanchard, Director**

Mr. Blanchard is a member of the Little Salmon/ Carmacks First Nation and plays an important role in promoting energy efficiency programs within Whitehorse and the rural communities. He has been on the board since August 1993.

**Ed Chambers, Director**

Mr. Chambers is a member of the Champagne and Aishihik First Nations and vice-chair of the board of directors. He resides in Champagne and was appointed a director in February 1991 at the recommendation of the Council of Yukon First Nations. Ed brings considerable experience to board discussions as its longest serving member and former chair of the audit committee.

**Carl Charlie, Director**

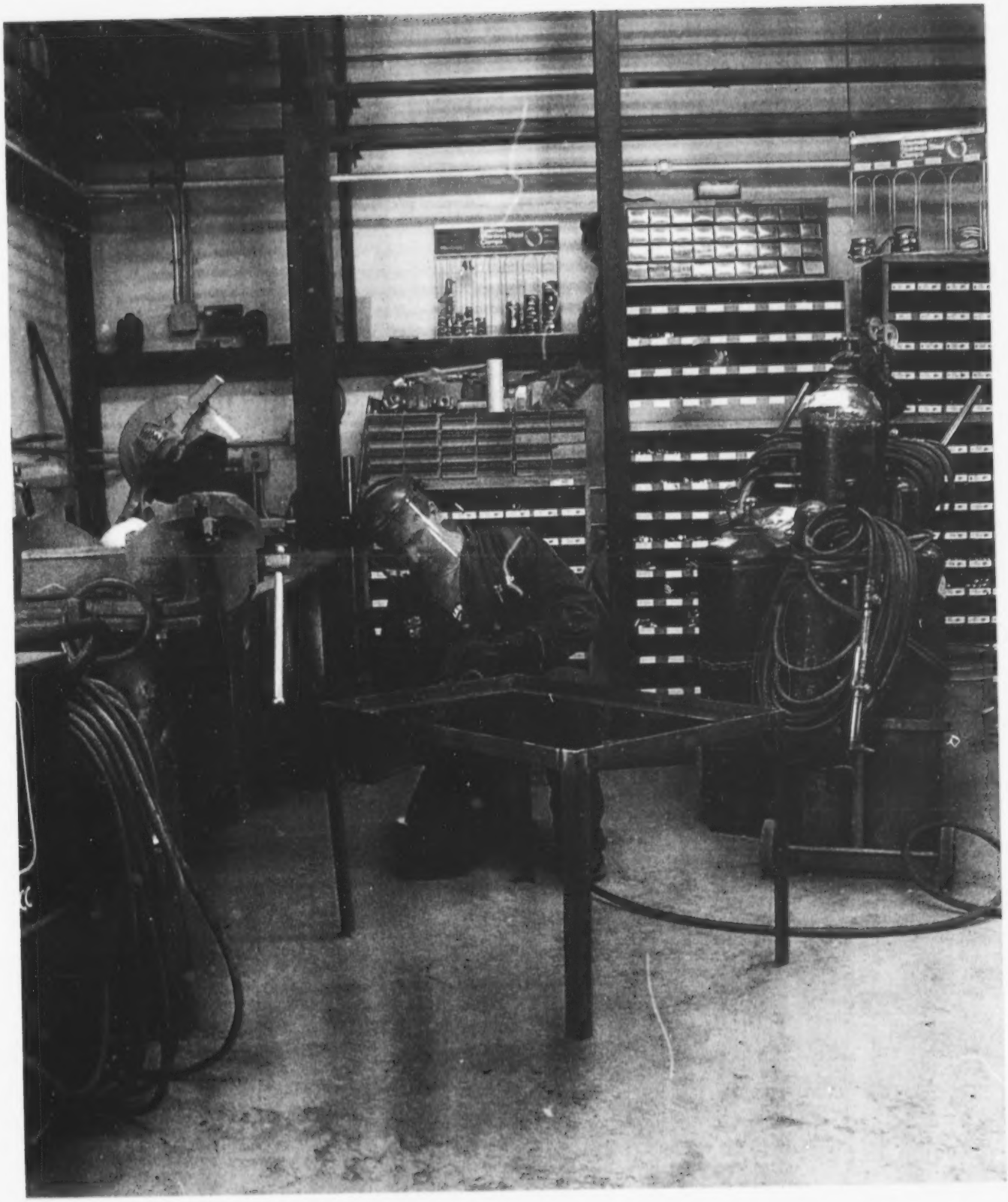
Mr. Charlie was appointed to the Board Of Directors in October 1999. He is a member and former councillor of the Vuntut Gwitchin First Nation, and has extensive experience in land use planning and a strong interest in assisting First Nation communities achieve greater energy sustainability and independence.

**Pat Irvin, Director**

Mr. Irvin has been a resident of the Yukon for over 25 years. He is the president of Watsonlakehotels.com, a corporation that operates three full-service hotels in Watson Lake. He has been on the board of directors since November 1995 and offers a wealth of experience on business and financial matters: He chairs the audit committee.

**Don Willems, President and C.E.O.**

Mr. Willems is a long-time Yukon resident with more than 15 years experience in the electrical utility industry. Mr. Willems is committed to the success of Yukon Energy and to the development of the corporation for the benefit of the Yukon. He believes that the north provides a challenging operating environment. "The Yukon Energy team of highly skilled, dedicated employees support environmental responsibility in day-to-day operations and demonstrate leadership and innovation in cost-effective, cold climate renewable energy."



# AUDITED FINANCIAL STATEMENTS

Auditor General of Canada
Vérificatrice générale du Canada

# AUDITOR'S REPORT

Mr. David Morrison
Chair, Yukon Energy Corporation

I have audited the balance sheet of Yukon Energy Corporation as at December 31, 2002 and the statements of income and retained earnings and cash flows for the year then ended. These financial statements are the responsibility of the Corporation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Corporation as at December 31, 2002 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Ronald C. Thompson, CA
Assistant Auditor General for the Auditor General of Canada

Ottawa, Canada
May 2, 2003

YUKON
ENERGY

## MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

Management is responsible for the preparation of the financial statements and all other financial information relating to the Corporation contained in this annual report. The financial statements have been prepared in conformity with Canadian generally accepted accounting principles using methods appropriate for the industry in which the Corporation operates and necessarily include some amounts that are based on informed judgments and best estimates of management. The financial information contained elsewhere in the annual report is consistent with that in the financial statements.

Management has established internal accounting control systems to meet its responsibilities for reliable and accurate reporting. These systems include policies and procedures, the careful selection and training of qualified personnel and an organizational structure that provides for the appropriate delegation of authority and segregation of responsibilities.

The Board of Directors, through its Audit Committee, oversees management's responsibilities for financial reporting. The Audit Committee meets regularly with management and the independent auditor to discuss auditing and financial matters to assure that management is carrying out its responsibilities and to review the financial statements. The auditors have full and free access to the Audit Committee and management.

Erik Hoenisch, CA
Chief Financial Officer

May 2, 2003

## Yukon Energy Corporation
## BALANCE SHEET

*As at December 31, 2002 (in thousands of dollars)*

| | 2002 | 2001 |
|---|---|---|
| **ASSETS** | | |
| **Current assets** | | |
| Cash and cash equivalents | $ – | $ 8,097 |
| Accounts receivable (note 3) | 4,610 | 6,677 |
| Inventories | 2,360 | 2,272 |
| Prepaid expenses | 702 | 441 |
| Due from parent | – | 596 |
| | **7,672** | **18,083** |
| **Funds held in trust (note 4)** | **3,479** | **789** |
| **Diesel Contingency Fund (note 5)** | **734** | **682** |
| **Capital assets (note 6)** | **144,421** | **123,046** |
| **Reserve for uninsured losses (note 7)** | **346** | **291** |
| **Deferred charges (note 8)** | **6,745** | **4,777** |
| | **$ 163,397** | **$ 147,668** |
| **LIABILITIES** | | |
| **Current liabilities** | | |
| Bank indebtedness (note 9) | $ 2,872 | $ – |
| Short-term debt (note 10) | 16,000 | – |
| Accounts payable (note 4) | 5,336 | 2,119 |
| Current portion of long-term debt (note 11) | 773 | 723 |
| Regulatory liabilities (note 12) | 2,169 | 1,804 |
| Due to parent | 387 | – |
| | 27,537 | 4,646 |
| **Deferred revenues (note 13)** | **9,175** | **9,355** |
| **Reserve for future removal and site restoration costs** | **4,875** | **5,041** |
| **Diesel Contingency Fund (note 5)** | **734** | **682** |
| **Long-term debt (note 11)** | **65,947** | **76,477** |
| | **108,268** | **96,201** |
| **SHAREHOLDER'S EQUITY** | | |
| **Share capital** | | |
| Authorized: Unlimited number of a single class of shares with no par value | | |
| Issued: 3,900 shares | 39,000 | 39,000 |
| **Retained earnings** | 16,129 | 12,467 |
| | **55,129** | **51,467** |
| | **$ 163,397** | **$ 147,668** |

**Commitments and contingencies (notes 17 and 18)**

The accompanying notes are an integral part of the financial statements.

**Approved by the Board:**

Chair

Director

## Yukon Energy Corporation
## STATEMENT OF INCOME AND RETAINED EARNINGS

*For the year ended December 31, 2002 (in thousands of dollars)*

| | 2002 | 2001 |
|---|---|---|
| **Revenue** | | |
| Sales of power | $ 23,786 | $ 22,242 |
| Other (note 15) | 777 | 703 |
| | **24,563** | **22,945** |
| **Operating expenses** | | |
| Administration (note 15) | 6,378 | 5,290 |
| Operations and maintenance | 5,295 | 5,208 |
| Amortization of capital assets | 5,058 | 4,797 |
| Amortization of deferred charges | 478 | 452 |
| | **17,209** | **15,747** |
| **Income from operations** | **7,354** | **7,198** |
| **Other expenses** | | |
| Finance expense (note 14) | 3,473 | 3,901 |
| Provision for uninsured losses (note 7) | 50 | 50 |
| | **3,523** | **3,951** |
| **Net income** | **3,831** | **3,247** |
| **Retained earnings, beginning of year** | **12,467** | **11,416** |
| **Dividend** | **(169)** | **(2,196)** |
| **Retained earnings, end of year** | **$ 16,129** | **$ 12,467** |

The accompanying notes are an integral part of the financial statements.

## Yukon Energy Corporation
## STATEMENT OF CASH FLOWS

*For the year ended December 31, 2002 (in thousands of dollars)*

| | 2002 | 2001 |
|---|---|---|
| **Cash provided from Operations** | | |
| Cash receipts from customers | $ 26,364 | $ 27,592 |
| Cash paid to employees and suppliers | (13,466) | (11,341) |
| Interest paid | (3,836) | (4,316) |
| Interest received | 146 | 355 |
| | **9,208** | **12,290** |
| **Cash provided from Financing** | | |
| Proceeds from short-term financing | 6,000 | – |
| Repayment of long-term debt | (648) | (687) |
| | **5,352** | **(687)** |
| **Cash used for Investment** | | |
| Additions to capital assets, net of contributions | (25,529) | (8,326) |
| | **(25,529)** | **(8,326)** |
| **Net (decrease) increase** | **(10,969)** | **3,277** |
| **Cash at beginning of year** | **8,097** | **4,820** |
| **(Bank indebtedness) Cash and cash equivalents at end of year** | **$ (2,872)** | **$ 8,097** |
| **(Bank indebtedness) Cash and cash equivalents consists of:** | | |
| Bank balances | 216 | 8,094 |
| Short-term investments | 3 | 3 |
| Bank overdraft | (1,991) | – |
| Operating line of credit | (1,100) | – |
| | **$ (2,872)** | **$ 8,097** |

The accompanying notes are an integral part of the financial statements.

## 1. NATURE OF OPERATIONS

Yukon Energy Corporation (the "Corporation") was incorporated under the *Yukon Business Corporations Act* and is a wholly owned subsidiary of Yukon Development Corporation, a Yukon Crown Corporation. Yukon Energy Corporation generates, transmits, distributes and sells electrical energy in the Yukon.

## 2. SIGNIFICANT ACCOUNTING POLICIES

### Financial statement presentation

The financial statements of the Corporation have been prepared by management and conform to Canadian generally accepted accounting principles and take into account generally accepted methods and practices of regulatory bodies. The regulatory accounting practices adopted by the Corporation may differ from the accounting practices otherwise applied in unregulated enterprises. In particular, the timing of the Corporation's recognition of certain assets, liabilities, revenues and expenses as a result of regulation may differ from that otherwise expected using generally accepted accounting principles. A description of the significant accounting policies follows.

### Water regulation

The Yukon Territory Water Board decides if and for how long the Corporation will have a water licence for the purposes of operating dams for hydro generation. The licences will also indicate terms and conditions for the operation of dams.

### Rate regulation

The Corporation is regulated by the Yukon Territory Water Board pursuant to the *Yukon Waters Act* (Canada) and the Yukon Utilities Board (YUB) pursuant to the *Public Utilities Act (Yukon)*. The regulatory process begins when the Corporation makes a General Rate Application for its proposed electricity rate changes over the next one or two forecast years. The Yukon Utilities Board must ensure that its decision, which fixes electricity rates, complies with all relevant legislation including the *Public Utilities Act* and directives issued by the Yukon Government through Orders-In-Council that specify how the interests of the customer and the utility are to be balanced.

The YUB follows a two-stage decision process. In the first stage the total costs that the utility will incur by making electricity available to its customers over the immediate future are approved. The approval of these costs determines the total revenues the utility is allowed to collect from its customers. It is the responsibility of the YUB to examine the legitimacy of three classes of costs:

- the costs to the utility to run its operations and maintain its equipment (personnel and materials);
- the cost associated with the amortization of all capital equipment;

**2. SIGNIFICANT ACCOUNTING POLICIES (continued)**

- the return on rate base (the costs related to borrowing that portion of rate base which is financed with debt, and the costs to provide a reasonable rate of return on that portion of rate base which is financed with equity).

In the second stage, the YUB approves how the revenue will be raised. This stage essentially determines the electricity rates for the various customer classes in the Yukon: residential, government, commercial and industrial. This process is guided mainly by a cost-of-service study which allocates utility costs to the various customer classes on the basis of appropriate costing principles. The determination of rates is also affected by Orders-In-Council, which give specific government direction to the Board.

Normally, the Corporation applies for rates in advance of the applicable years. A hearing takes place and rates are approved as final as a result of the hearing. Interim hearings and interim rates may be used to deal with unforeseen circumstances.

**Capital assets**

Capital assets are stated at cost which includes materials, direct and indirect labour, an appropriate allocation of administrative overhead and finance charges capitalized during construction, less accumulated amortization. Amortization is based on the straight-line method over the estimated economic life of the assets as follows:

| | |
|---|---|
| Generation | |
| Hydro-electric plants | 40 to 65 years |
| Diesel plants | 15 to 25 years |
| Transmission | 25 to 35 years |
| Distribution | 20 to 30 years |
| Buildings | 20 to 30 years |
| Transportation | 8 to 14 years |
| Other equipment | 5 to 15 years |

The Corporation capitalizes development studies and an allowance for funds used during construction (AFUDC) at a rate approved by the Yukon Utilities Board for debt and equity funds.

Certain additions are made with the assistance of cash contributions where the estimated revenue is less than the cost of providing service or where special equipment is needed to supply customers' specific requirements. These contributions are amortized to income on the same basis as and offset the amortization charge of the assets to which they relate. Capital assets are disclosed net of unamortized contributions. Upon retirement or disposal, any gain or loss is charged to income in the current year for assets depreciated on an individual basis, or charged to accumulated depreciation for assets depreciated on a pooled basis.

**2. SIGNIFICANT ACCOUNTING POLICIES (continued)**

**Inventories**

Inventories which consist of materials, supplies and diesel fuel are recorded at the lower of average cost or replacement value.

**Deferred charges**

Deferred charges are recorded at cost less accumulated amortization.

Costs related to water licence renewals are deferred and amortized to earnings on a straight-line basis over the term of the existing license plus the expected term of the renewed license, which is generally a long-term arrangement of 25 years.

Planning and study costs related to research projects and operations are expensed as incurred. Costs related to potential capital development projects which are abandoned are amortized to earnings on a straight-line basis over five years starting in the year that the project is abandoned.

General equipment overhaul expenditures in excess of $250,000 are deferred and amortized to earnings on a straight-line basis over five years.

Other deferred charges are amortized to earnings on a straight-line basis over various terms approved by the Yukon Utilities Board.

**Reserve for uninsured losses**

The Corporation maintains a reserve for uninsured losses. An appropriation to the reserve of $50,000 is made annually as a charge to expenses. Uninsured losses are charged directly against the reserve.

**Reserve for future removal and site restoration costs**

The reserve is calculated based on the estimated cost of demolishing, dismantling, tearing down, or otherwise disposing of the asset, net of expected recoveries. These estimated costs are being provided for over the estimated useful life of the asset on a straight-line basis.

**Revenue recognition**

Revenue from the sale of power is recorded when electricity is delivered.

**Use of estimates**

The preparation of financial statements in accordance with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. This mainly affects revenue, accounts receivable, capital assets, the reserve for future removal and site restoration and other long-term receivables. Actual results could differ from these estimates.

## 3. ACCOUNTS RECEIVABLE

| | 2002 | 2001 |
|---|---|---|
| Retail energy sales | $ 2,098 | $ 2,235 |
| Wholesale energy sales | 1,704 | 1,809 |
| Other | 169 | 258 |
| Rate adjustment receivable | 124 | 1,144 |
| Fire insurance claim | 15 | 1,231 |
| | **$ 4,610** | **$ 6,677** |

Accounts receivable includes $2,528,000 (2001 – $2,446,000) due from The Yukon Electrical Company Limited. The Corporation's sales to The Yukon Electrical Company Limited were approximately $15,288,000 (2001 – $14,981,000) but, due to the wholesale nature of the sales, the Corporation is not economically dependent on them.

## 4. FUNDS HELD IN TRUST

Funds held in trust represent holdbacks from payments made to the general contractor on the Mayo-Dawson City transmission line project. These will be held by the Corporation pending satisfactory completion of the project, at which time the monies will be released. An offsetting liability is recorded in accounts payable and is equal to the holdbacks held.

## 5. DIESEL CONTINGENCY FUND

The Diesel Contingency Fund was established with Board Order 1996-6 by the Yukon Utilities Board. The Fund is administered by the Corporation on behalf of the Yukon Utilities Board, and as such is recorded as a trust asset and a trust liability.

| | 2002 | 2001 |
|---|---|---|
| Opening balance | $ 682 | $ (61) |
| Whitehorse Rapids Generating Facility fire adjustment | - | 744 |
| Interest | 52 | (1) |
| Closing balance | **$ 734** | **$ 682** |

The Whitehorse Rapids Generating Facility fire adjustment is the Corporation's calculation of the impact of the October 1997 fire to the Diesel Contingency Fund in 1999 and was approved in Yukon Utilities Board Order, 2002-03.

## 6. CAPITAL ASSETS

| | Cost | Accumulated amortization | 2002 Net book value | 2001 Net book value |
|---|---|---|---|---|
| Hydro-electric and diesel plants | $ 129,302 | $ 35,430 | $ 93,872 | $ 91,865 |
| Transmission | 19,808 | 6,974 | 12,834 | 13,064 |
| Distribution | 10,770 | 3,787 | 6,983 | 7,097 |
| Buildings and other equipment | 13,246 | 4,057 | 9,189 | 8,592 |
| Transportation | 1,260 | 278 | 982 | 1,017 |
| Land and land rights | 677 | – | 677 | 110 |
| Construction-in-progress | 24,779 | – | 24,779 | 6,275 |
| | **199,842** | **50,526** | **149,316** | **128,020** |
| Less: contributions for plant extensions | 5,968 | 1,073 | 4,895 | 4,974 |
| | **$ 193,874** | **$ 49,453** | **$ 144,421** | **$ 123,046** |

The above amounts exclude the costs of assets which were damaged and destroyed in the October 30, 1997 fire at the Whitehorse Rapids Generating Facility. The costs of the assets which were used to reconstruct the facility equalled $13,395,000 and are included in the capital asset costs above. As an offset, an amount equal to $11,604,000 representing insurance proceeds received to cover the cost of reconstruction is accounted for as a deferred revenue (see note 13). The difference, equal to $1,791,000, represents the value of betterments which improved the facility beyond the value replaced by the insurance proceeds.

## 7. RESERVE FOR UNINSURED LOSSES

| | 2002 | 2001 |
|---|---|---|
| Opening balance | $ 291 | $ 316 |
| Provision | (50) | (50) |
| Losses incurred | | |
| Weather-related losses | 72 | – |
| Asset replacements | 33 | – |
| Forest fire | – | 25 |
| Closing balance | **$ 346** | **$ 291** |

The Corporation's target balance for the reserve for uninsured losses is based on the Corporation's past experience. The Corporation will be applying to the Yukon Utilities Board for approval to increase the reserve.

## 8. DEFERRED CHARGES

| | Cost | Accumulated amortization | 2002 Net book value | 2001 Net book value |
|---|---|---|---|---|
| Relicensing | $ 6,830 | $ 1,094 | $ 5,736 | $ 3,947 |
| Feasibility studies | 637 | 115 | 522 | 291 |
| Downsizing costs | 320 | 72 | 248 | 272 |
| Generating equipment overhauls | 348 | 278 | 70 | 139 |
| Dam safety review | 92 | 55 | 37 | 55 |
| Diesel fuel price adjustment | 132 | – | 132 | 73 |
| | **$ 8,359** | **$ 1,614** | **$ 6,745** | **$ 4,777** |

Deferred charges have been deferred and amortized in accordance with decisions of the Yukon Utilities Board.

The Corporation is authorized by Order-In-Council 1995/90 to adjust its rates to reflect fluctuations in the price of diesel fuel without the requirement for specific application to and approval of the Yukon Utilities Board. Fluctuations in diesel fuel costs from approved levels are deferred and recovered or refunded over designated future periods prescribed by the Yukon Utilities Board through revised rates charged to customers.

## 9. BANK INDEBTEDNESS

| | 2002 | 2001 |
|---|---|---|
| Bank overdraft | $ 1,772 | $ – |
| Operating demand line of credit | 1,100 | – |
| | **$ 2,872** | **$ –** |

Balances outstanding under the bank overdraft facility accrue interest at the bank prime rate. At December 31, 2002, this rate was 4.50%. The operating demand line of credit allows the Corporation to borrow up to $10,000,000 at bank prime. The overdraft facility and operating demand line of credit are guaranteed by the Yukon Government. The bank overdraft balance includes cash balances of $216,000 and short-term investments of $3,000. Corresponding, 2001 bank balances and short-term investments are shown separately on the Balance Sheet as cash and cash equivalents.

## 10. SHORT-TERM DEBT

| | 2002 | 2001 |
|---|---|---|
| Operating loan | $ 10,000 | $ – |
| Promissory note | 6,000 | – |
| | **$ 16,000** | **$ –** |

**10. SHORT-TERM DEBT (continued)**

The operating loan is a demand loan held by the parent, Yukon Development Corporation, and represents bridge financing to support the construction of the transmission line between Mayo and Dawson City. The loan matures on the issuance of a replacement debt instrument to Yukon Development Corporation by Yukon Energy Corporation at the completion of the transmission line project. The interest rate is equal to the TD Canada Trust Bank Prime Rate adjusted monthly as necessary. At December 31, 2002, the rate was 4.50%. Interest payments are made monthly.

The promissory note is held by the parent, Yukon Development Corporation, and is payable on demand. Interest is payable monthly and the rate is equal to 3.34%. Principal balance is due at March 31, 2003 or after 30 days on demand of issuer.

## 11. LONG-TERM DEBT

The Corporation's long-term debt is summarized as follows:

| | 2002 | 2001 |
|---|---|---|
| **Government of Canada** | | |
| $40,000,000 flexible term note bearing interest at 7% repayable in annual installments of $1,000,000 principal, plus accrued interest, with the balance due January 1, 2028 | $ 29,056 | $ 29,302 |
| **Yukon Development Corporation** | | |
| Unsecured advances bearing interest at 9.79% due one year after demand | 8,786 | 17,158 |
| Unsecured advances bearing interest at 8.94% due one year after demand | 1,654 | 1,654 |
| Unsecured advances bearing interest at 10.24% due one year after demand | – | 1,627 |
| Unsecured advances bearing interest at 9.17% due one year after demand | 1,696 | 1,696 |
| Unsecured advances bearing interest at 8.78% due one year after demand | 3,285 | 3,285 |
| Unsecured advances bearing interest at 7.12% due one year after demand | 1,110 | 1,110 |
| Unsecured advances bearing interest at 6.68% due one year after demand | 4,216 | 4,216 |
| Unsecured advances bearing interest at 7.49% due one year after demand | 3,406 | 3,406 |
| Unsecured advances bearing interest at 6.82% due one year after demand | 796 | 796 |
| Unsecured advances bearing interest at 6.96% due one year after demand | 2,196 | 2,196 |
| Unsecured advances bearing interest at 6.59% due one year after demand | 169 | — |
| **TD Canada Trust** | | |
| $12,400,000 term note bearing interest at 7.94% payable in monthly installments of $102,000 interest and principal, with the balance of $67,000 due October 31, 2016. The note is guaranteed by the Yukon Government. | 10,350 | 10,754 |
| | **66,720** | **77,200** |
| Less: current portion | 773 | 723 |
| | **$ 65,947** | **$ 76,477** |

**11. LONG-TERM DEBT (continued)**

### Government of Canada note

The proceeds of the Government of Canada flexible term note were part of the consideration used in 1987 to acquire the assets of Northern Canada Power Commission. The note is collateralized by a mortgage against the acquired assets.

The terms of the flexible term note provide for payments of principal and interest to be deferred and abated, respectively, if power sales on the Whitehorse-Aishihik-Faro electrical power distribution system are less than specified amounts.

### Long-term debt refinancing

During the year, $10 million in unsecured advances was repaid to Yukon Development Corporation. Subsequently, this amount was re-borrowed from Yukon Development Corporation as an operating demand loan (see Note 10).

### Long-term debt repayment

Scheduled repayments for all long-term debt are as follows:

| | |
|---|---|
| 2003 | $ 773 |
| 2004 | 789 |
| 2005 | 832 |
| 2006 | 879 |
| 2007 | 929 |
| Thereafter | 62,518 |
| | **$ 66,720** |

### Fair value

Fair value of $76,120,000 (2001 – $90,108,000) for all long-term debt was estimated using discounted cash flows based on an estimate of the Corporation's current borrowing rate for similar borrowing arrangements.

## 12. REGULATORY LIABILITIES

| | 2002 | 2001 |
|---|---|---|
| Insurance proceeds held on behalf of ratepayers | $ 744 | $ 744 |
| Anvil Range Mine dewater revenue | 1,425 | 1,060 |
| | **$ 2,169** | **$ 1,804** |

The insurance proceeds held on behalf of ratepayers amount represents the residual balance of insurance proceeds after allocation against all known fire-related reconstruction and operation and maintenance costs. The Corporation is required to use the balance of the insurance proceeds to the benefit of rate payers. The allocation of this amount will be the subject of a decision of the Yukon Utilities Board.

Anvil Range Mine dewater revenue derives from Rate Schedule 34 customers, of which the Anvil Range Mine represents the only customer in the class. As directed by the Yukon Utilities Board in Board Order 1998-5, the Corporation is deferring revenues collected from this rate class until application to the benefit of ratepayers is directed by the Yukon Utilities Board.

## 13. DEFERRED REVENUES

| | 2002 | 2001 |
|---|---|---|
| Deferred gain on fire insurance proceeds-capital assets (net of amortization and adjustments $2,429,000 (2001 – $2,248,000)) | **$ 9,175** | **$ 9,355** |

The deferred gain on fire insurance proceeds-capital assets represents the gain resulting from insurance proceeds received in relation to the reconstruction of facilities ($11,604,000 — see notes 6 and 12) in excess of net book value of assets destroyed by fire. The gain is being amortized to income at the same rate that the replacement assets are being amortized, as approved by the Yukon Utilities Board Order 2000-3.

## 14. FINANCE EXPENSE

| | 2002 | 2001 |
|---|---|---|
| Interest on long-term debt | $ 3,823 | $ 4,376 |
| Allowance for funds used during construction | (203) | (120) |
| Interest income | (147) | (355) |
| | **$ 3,473** | **$ 3,901** |

## 15. RELATED PARTY TRANSACTIONS

The following table summarizes the Corporation's related party transactions for the year:

| | 2002 | 2001 |
|---|---|---|
| Revenue | | |
| Sales of services to: | | |
| - direct parent company | $ 478 | $ 304 |
| - wholly owned subsidiary of parent company | 61 | 9 |
| | $ 539 | $ 313 |
| Rate Stabilization Fund revenue from: | | |
| - direct parent company | $ 297 | $ 321 |
| Expense | | |
| Payment of interest on long-term debt to: | | |
| - direct parent company | $ 2,521 | $ 3,111 |

The transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. Revenue from related parties is reported as Other revenue on the income statement. The corresponding cost of providing these services is reported as part of Administration expense on the income statement.

Interest on long-term debt is included on the income statement under Finance expense. Rate Stabilization Fund revenues are received from the parent in accordance with terms established by the Yukon Government, which established the Fund to protect certain ratepayers by minimizing the impact of rate increases. These revenues are reported on the income statement as a component of Sales of power.

At the end of the year, the amounts due from and (due to) related entities are as follows:

| | 2002 | 2001 |
|---|---|---|
| Direct parent company | $ (43,701) | $ (36,548) |
| Wholly owned subsidiary of parent company | 59 | 9 |

Amounts owing to the parent company include long-term debt $27,314,000 (2001 – $37,144,000), short-term debt $16,000,000 (2001 – $0) and sales of services $387,000 (2001 – ($596,000)). Amounts owing from the wholly owned subsidiary of the parent relate to sales of services. These balances are payable on demand.

## 16. PENSION COSTS AND OBLIGATIONS

The Corporation has a defined benefit pension plan which provides for pensions based on length of service and final average earnings. The cost of pension benefits is determined using the projected benefits method, prorated on service, and reflects management's best estimates of investment returns, wage and salary increases, and age at retirement. Adjustments resulting from the plan enhancements, experience gains and losses, and changes in assumptions are amortized over the estimated average remaining service life of employees. Pension costs include the current cost of service and amortization of past service benefits and plan enhancements, and experience gains and losses. Amortization is on a straight-line basis over the expected average remaining service life of pension plan members, which is currently 16 years.

The Corporation has contracted with external organizations to provide services of trustee, administrator and investment manager for the pension plan.

An actuarial valuation for funding purposes was performed as of January 1, 2001 by the consulting actuarial firm AON Consulting Inc. The results of the January 1, 2001 valuation have been projected to December 31, 2002 in accordance with generally accepted actuarial standards. The actuarial valuation includes services rendered by members under the Yukon Energy Corporation Employees Pension Plan from January 1, 1998 to December 31, 2002 and service credits in respect of pre-1998 service transferred to the Yukon Energy Corporation Employees Pension Plan from the Canadian Utilities Employees Pension Plan under the Acknowledgement and Agreement between Yukon Energy Corporation and the Yukon Electrical Company Ltd., dated February 5, 1999.

The fair value of the plan assets is based on market values as reported by Royal Trust as at December 31, 2002.

The following table sets out the assumptions and pension amounts as at December 31, 2002. The Corporation's employees had the option to belong to the Corporation's defined benefit pension plan or a Registered Retirement Savings Plan (RRSP). Employees joining the Corporation after January 1, 2002 can only join the RRSP. As at December 31, 2002, the Corporation's defined pension plan had 42 members, and the RRSP had 24 members.

Pension benefits are based on:

- years of pensionable service,
- the average annual earnings during any 5 consecutive years of pensionable service where earnings are the highest, and
- the average of the years maximum pensionable earnings (Canada Pension Plan) for the same 5-year period.

**16. PENSION COSTS AND OBLIGATIONS (continued)**

Annual cost of living increases to a maximum of 3.00% are provided to pensioners. The Corporation contributes amounts as prescribed by an independent actuary.

Employees make contributions to the plan as follows:

- 3.5% of earnings up to the year's maximum pensionable earnings
- 5.0% of earnings in excess of year's maximum pensionable earnings

to a maximum of $2,500 per year.

Information about the company's defined benefit plan as at December 31, in aggregate, is as follows:

| | 2002 | 2001 |
|---|---|---|
| Discount rate | 6.50% | 6.50% |
| Expected long-term rate of return on plan assets | 7.00% | 7.00% |
| Assumed rate of salary escalation | 3.75% | 3.75% |
| Expected average remaining service life of employees | 16 years | 18 years |
| Benefit obligation determined by actuarial valuation | $ 5,516 | $ 4,862 |
| Fair value of plan assets | 4,018 | 4,183 |
| Plan deficit | $ (1,498) | $ (679) |
| Accrued benefit liability | $ (223) | $ (95) |
| Pension expense | $ 335 | $ 268 |
| Employer contributions | $ 207 | $ 208 |
| Employee contributions | $ 89 | $ 79 |
| Benefits paid | $ 64 | $ 206 |

The accrued benefit liability has been recorded on the Corporation's books of account and is included in accounts payable on the balance sheet at December 31, 2002.

## 17. COMMITMENTS AND CONTINGENCIES

(a) As of December 31, 2002, there are outstanding claims against the Corporation from the general contractor on the Mayo to Dawson transmission line project for work completed prior to December 31. As well, the Corporation also has claims against the general contractor. The amount and likelihood of settlement are not determinable at this time.

(b) As described in note 11, the terms of the flexible term note with the Government of Canada provide for payments of principal and interest to be deferred and abated respectively, if particular power sales are less than specified amounts. The Corporation and the Government of Canada disagree on the definition of these power sales and the Corporation is making payments based on its interpretation of the note.

## 18. ENVIRONMENTAL LIABILITIES

The Corporation's activities are subject to various federal and territorial laws and regulations governing the protection of the environment or to minimize any adverse impact thereon. The Corporation conducts its operations so as to protect public health and the environment and believes its operations are materially in compliance with all applicable laws and regulations. Liabilities will be recorded when the occurrence of an environmental expenditure, related to present or past activities of the Corporation, is considered probable and the costs can be reasonably estimated. To date, no such specific liabilities have been recorded in the Corporation's accounts.

## 19. FINANCIAL INSTRUMENTS

The fair value of accounts receivable, funds held in trust, bank indebtedness, short-term debt and accounts payable approximate the carrying amount of these instruments due to the short period to maturity. The fair value of long-term debt is described in note 11.

## 20. COMPARATIVE FIGURES

Certain 2001 figures, which are presented for comparative purposes, have been reclassified to conform with the current year's presentation.

## PHOTOGRAPH CREDITS

### Yukon Energy Corporation 2002 Annual report

YCS: Yukon Conservation Society
YE: Yukon Energy
YG: Yukon Government

CA: Cathie Archbould
JP: J-P Pinard
KH: Kevin Hastings

MB: Marten Berkman
PL: Peter Long
SS: Sean Sheardown

cover: stringing cable along the new Mayo to Dawson City transmission line (CA)

facing p.1: Martin Gehrig, diesel turbine operator, Dawson City (YE)

p.1: Mayo (YG)

p.2: Scott Hoffman (Orbis Engineering), Dave Wray, Dave Moline, Jack Weir, Stu Cook (YE)

p.3: walkers and runners at Run for Mom (PL)

p.4: Mike Sikeliski of R.S. Line Contractors drilling hole on new Mayo-Dawson City transmission line (CA)

p.5: Aishihik dam with fish ladder on right (YE); interior of powerhouse with scroll case of number 2 unit in foreground, June 1974 (YE)

p.6: building the berm at Aishihik Village (SS); Ron Peck of Silver Trail Contracting on the new transmission line (CA)

p.7: mechanic Steve Milner doing maintenance in Whitehorse (YE); R.S. Line Contractors on the new transmission line (CA)

p.8: diesel plant at Stewart Crossing (PL)

p.9: Steve Frost and Martin Frost installing wind testing apparatus at Old Crow (JP); Kris Selzer showing rime ice on wind monitoring equipment on Mt. Sumanik (JP)

p.10-11: workers from Team Machinist and Millwright Services Ltd. working on upgrade at Mayo power plant (YE)

p.12: spillway at Whitehorse Rapids dam (PL); workshop on fishway redevelopment, led by Ian Robertson (PL)

p.13: fish hatchery tanks and new ground source heat pump equipment (PL)

p.14: opening of Millennium Trail with Jon Breen (Yukon Council on Disability), Ernie Bourassa (Mayor of Whitehorse), Don Willems (President of Yukon Energy) and Douglas Hnatiuk (City of Whitehorse) (PL); along the trail (PL); Ron Kirkwood working on the diesel in Whitehorse (YE)

p.17: Pat Peirson, Office Administrator in Dawson City (KH); Yukon Energy Whitehorse staff, Wendy Fendrick (Contoller), Darcie McKay and Wendy Saboe (Finance) and Shelley Dixon (Executive Assistant) (YE)

p.19: Bob Van Dijkin and visitors to the Yukon Energy booth at the energy fair (YE); group at Canyon City on the Yukon River (YCS); fish fry release at Wolf Creek (CA)

p.24: Pat Matcoff, instrumentation electrician at Whitehorse (YE)

p.25: board of directors (missing: Carl Charlie) (CA)

p.26-27: board of directors (CA, MB)

p.28: Jim Petelski working on the diesel turbine at Whitehorse (YE)

p.29: facilities at Whitehorse Rapids dam (PL)

Yukon's energy solutions group of companies

ISSN 1708-6957